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ABSTRACT

A descriptive study examined the relationships between what young children learned about written language in the home and their parents' levels of literacy ability and their uses of print in their lives. Twenty-four children, aged 4-6, in 20 families of low socioeconomic status were observed during their waking hours in their homes and communities for an aggregated week. Researchers in participant observer roles noted all instances of uses of print within the homes and families and administered a series of tasks to the children that were designed to measure critical written language concepts found to influence the degree of success young children experience in beginning literacy instruction. Analysis revealed that overall there was a low level of print use in the homes. Families tended to use print mainly for entertainment purposes and daily living routines. The greatest proportion of text used in the homes was at the clausal/phrasal level. The children, as a group, displayed a below-average knowledge of written language concepts. Children whose parents read and write at more complex levels of text and who read and write with their children began formal literacy instruction knowing more about critical written language concepts. Adult education programs that focused on family literacy positively influenced both the frequency of literacy events and of mother/child interactions around literacy. (Appendixes include observers' narratives.) (YLB)

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ED 372 288

RELATIONSHIPS BETWEEN PARENTAL LITERACY SKILLS AND FUNCTIONAL USES OF PRINT AND CHILDREN'S ABILITY TO LEARN LITERACY SKILLS

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Abstract

This descriptive study examined the relationships between what young children learn about written language in the home and their parents' levels of literacy ability and their uses of print in their lives. Twenty four children, in 20 families of low socioeconomic status, between the ages of 4 and 6 were observed during their waking hours in their homes and communities for an aggregated week. Researchers, assuming participant observer roles, noted all instances of uses of print within the homes and families. They also administered a series of tasks to the focal children, designed to measure critical written language concepts found to influence the degree of success young children experience in beginning literacy instruction. Analysis revealed that overall, there was a low level of print use in the homes, although variation did exist. Families tended to use print mainly for entertainment purposes and daily living routines. The greatest proportion of text used in the homes was at the clausal/ phrasal level, e.g. food coupons, container print. The next most used level was at the full written discourse level of complexity found in books, magazines, and documents. The children, as a group, displayed a below-average knowledge of written language concepts. The results revealed that children whose parents read and write on their own at more complex levels of text and who read and write with their children begin formal literacy instruction knowing more about critical written language concepts than those children whose parents do not. Parents with lower levels of literacy do less of this and thus are unable to help their children acquire the concepts in the home which will be needed to make sense of instruction in school. Results also showed that schooling makes a big difference regarding the acquisition of this knowledge for these children. Further, adult education programs which focus on family literacy positively influence both the frequency of literacy events and of mother/ child interactions around literacy.

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RELATIONSHIPS BETWEEN PARENTAL LITERACY SKILLS AND FUNCTIONAL USES OF PRINT AND CHILDREN'S ABILITY TO LEARN LITERACY SKILLS

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Rationale of Study

The National Institute for Literacy has established as one of its research priorities investigations of the relationship(s) between parental literacy skill levels and the ability of their children to learn literacy skills. This focus reflects the general belief that children of non- or low-literates will struggle to learn to read and write much more than children from literate families. While this may be a widely-held perception on the part of educators and the general public, an informed, scientific examination of this precept has yet to be carried out. We have yet to probe operational specifics of this apparent correlation between parent and child literacy attainment. Until we do so, we run the risk of accepting and institutionalizing an unexamined belief. An unexamined belief which impacts on the educational potential of millions of children is perilous to a democratic society dedicated to fair and equal access for all.

First, we need to question whether or not a true relationship exists between parent level of literacy skill and child attainment of same, or is this, instead, another example of a correlation which reflects other operative factors. For example, most children of non- or low-literates also live in poverty with all of the attendant ills which can affect ability to learn: poor nutrition, poor access to adequate health care, often disrupted and disruptive living conditions, and a familial focus on daily survival over academic achievement. It could very well be that these conditions of poverty are the operative factors preventing full access to literacy for these children. To deconfound the factors of parental literacy level and poverty is extremely difficult since the two are so closely intertwined. However, the time has come to begin to attempt this.

Clearly the belief that a child from a non- or low-literate home will experience difficulty learning to read and write <u>by virtue of</u> the fact that his/her parent(s) cannot read or write needs much examination and careful research. It is an important topic and one which we can no longer ignore. This is so, because, while we cannot simply accept this general belief, we cannot simply dismiss it either. An indisputable relationship exists between parental literacy skill and child success at literacy attainment, usually measured by mother's level of education (Applebee, Langer, & Mullis, 1988). We must seek to understand this relationship so that when we uncover the true operative factors, we can inform practice and policy both for the education of parents and for the education of their children. This study addressed this need.

Literacy researchers have recently begun to look seriously at this issue, and the term intergenerational, or family literacy, has emerged as the label for this focus. The research suggested by this interest is based upon several presuppositions: (a) that children acquire their basic cognitive and linguistic skills within the context of the family (Sticht & McDonald, 1981); (b) school achievement and test scores are higher for children whose parents have more education and more books in the home (Applebee et al., 1988); and (c) parents who are low-literate cannot support their children's literacy learning nor pass on positive attitudes about schooling and the importance of learning to read and write (Newman & Beverstock, 1990). These rationale are used for the establishment of intergenerational and family literacy programs where either adults learn to read and write with materials and in ways that facilitate the passage of their skills to their children, or adults and children attend literacy classes together (Darling, 1989; Nickse, 1989). Thus, the obvious place to conduct research intended to examine the relationship between parental literacy level and children's ability to learn to read and write is in the homes of these children as they interact within a family context.

This study examined the nature of the relationship between parental literacy skill level/ the uses of print within the home/family context and their children's abilities to learn literacy skills. The research is informed by cognitive and linguistic fields which view learning as an active process largely directed by the learners who attempt to make sense of the world in light of what they already know, understand, and believe. It is also informed by the emergent literacy research which asserts that children growing up in literate environments learn many important concepts related to reading and writing through social interaction with important others in their lives. This knowledge begins at birth and by the time these children begin formal literacy instruction, they possess critical understandings about reading and writing which enable them to make sense of formal reading and writing instruction and progress toward full literacy. Findings from the major research fields which provide the theoretical context for this research project are summarized below.

Review of Relevant Literature

Oral/Written Language Differences and Relationships

Written language is not simply oral language written down. Linguists have uncovered differences between the two that go beyond the mode of delivery. If one has ever tried to read and comprehend a transcript of an oral event such as a conversation or even a lecture, this difference will be apparent. These differences are due to such pragmatic factors as psychological and physical distance from audience, function, amount of time people have to produce the language, and degree of permanence of the language. The vocabulary, syntax, and cohesive conventions of written

language differ in shifting degrees depending upon genre in response to these pragmatic factors (Chafe & Danielewicz, 1987; Horowitz & Samuels, 1987; Perfetti, 1987). This is crucial information to consider because people learn to read and write written language not oral language.

Written language tends to employ lexical choices which have been termed "literary" as compared to "colloquial" (e.g. entrance rather than door), more embedded and transformed syntax (e.g. Down the hill ran the green, scaly dragon. as compared to The dragon ran down the hall. He was green and scaly.); and references which are termed endophoric (within text) rather than exophoric (outside of text). This latter featural contrast reflects a basic difference between oral and written language: Oral language is contextualized in that the producer and receiver share the same physical space while written language is decontextualized in that writers shape their language under the assumption that they will not be physically present when the readers process it for meaning. Thus, all meaning must be retrievable from the linguistic text, eliminating exophoric references (e.g., He was cold and hungry without previous mention of a referent for He), prosodic cues (Schrieber, 1987), and other metalinguistic aids to meaning construction such as gesture, facial expression, and body language (Rubin, 1977).

Emergent Literacy

The interest in how and when children begin to learn to read and write is closely related to the linguistic research on oral and written language differences just cited. Given that written language is not simply oral language in print, how do children learn about the natures of written language? The featural differentiators just summarized are certainly not taught in formal beginning literacy instruction. Assuming that children begin constructing knowledge about reading and writing long before formal instruction, emergent literacy researchers have examined literacy events in contexts other than schools. Literacy events refers throughout this proposal to any activities which involve the reading or writing of print.

Young children appear to learn (implicity, not necessarily explicitly) about written language within roughly three dimensions, each constraining and defining the other (Purcell-Gates, 1986). Figure 1 portrays this relationship. First, everything they learn about written language is constrained by what they learn through experience about its functions and the values placed on its various forms within their particular sociolinguistic communities and cultures (Anderson & Stokes, 1984; Clay, 1976; Heath, 1982; Scheiffelin & Cochran-Smith, 1984; Taylor, 1982; Taylor & Dorsey-Gaines, 1988). Within this frame, they learn about the natures, characteristics, and language forms of written language (Butler & Clay, 1979; Snow & Ninio, 1986; Holdaway, 1979). As children

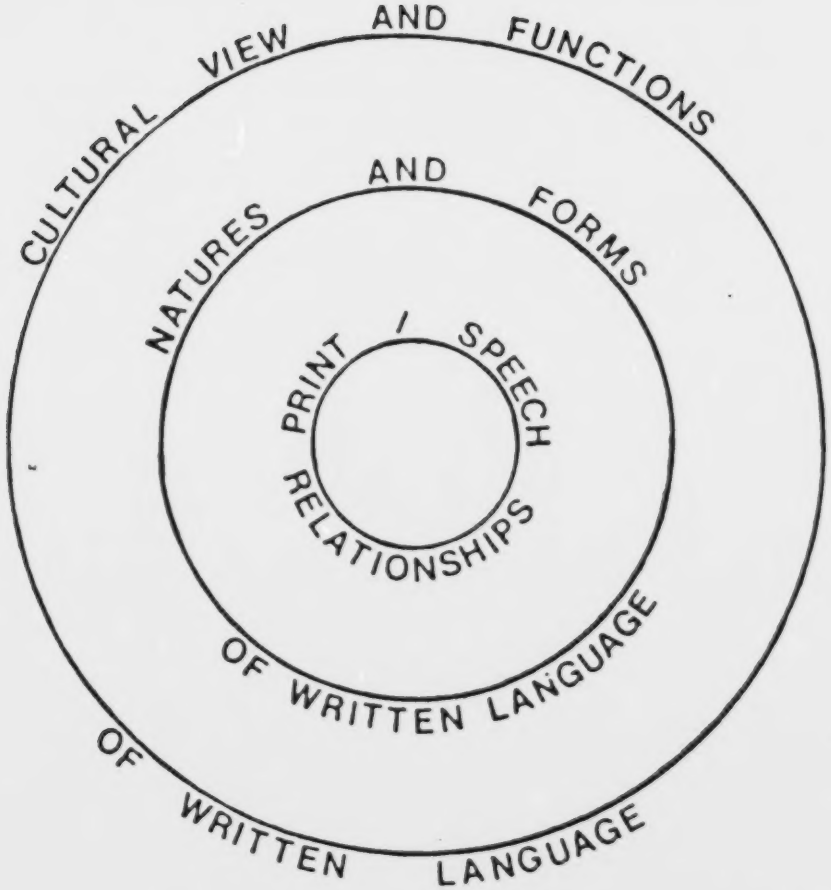

FIGURE 1. Three Levels of Knowledge Acquired by Young Children about Written Language Prior to Formal Literacy Instruction

participate in literacy events utilizing particular forms of written language, they learn that print is a language signifier -- that it carries linguistic meaning -- and the conventions of print (Dyson, 1989; Ferriero & Teberosky (1982).

To illustrate the above, consider: If storybooks are read and valued within a young child's home, this child will learn (a) written language is used to record stories which are read for pleasure (function); (b) that written stories have a particular macrostructure which can be used to predict and recall the story (form); (c) that written narrative uses particular words and sentence structures that people do not use when conversing (nature and characteristics of form); and (d) that print stands for language and can be recorded and decoded via a particular system which in English is alphabetic, read left to right, and from top to bottom (conventions of print). This child will learn about the functions, natures, and conventions of written stories. Another child who comes from a home where only the Koran is read aloud and no other uses of print are available will learn about the function, nature and conventions of the written Koran but not about written stories. Children learn about what they experience and participate in within their particular sociolinguistic cultures.

Cognitive Theory

We must know as specifically as possible what it is that different groups of children implicitly know about written language when they come to school because background knowledge has been shown to be centrally involved in ones' ability to make sense of the world -- to learn (Anderson, 1980; Neisser, 1976). Children's ability to make sense of and to learn from instruction on producing and comprehending written language will depend upon what they already know about it along the different conceptual, cognitive dimensions just described.

Further, information processing research firmly documents the effect of expectations on word-by-word processing of print (reading). The research into the effect of expectations (often referred to as "context effects") on perception/recognition provides overwhelming evidence that expectations result in faster and more accurate recognition of objects, including letters and words, if those expectations are congruent with the observed data (Becker & Killion, 1977; Beiderman, Glass & Stacy, 1973; McClelland & Rumelhart, 1981, 1982; Meyer, Schvaneveldt & Ruddy, 1979; Stanovich & West, 1978, 1981). Thus, children who have implicitly learned the specialized vocabulary and syntax of written stories will process such print more accurately and with greater ease than children for whom this style of language is new. Research has confirmed that well-read-to children know a great deal about vocabulary and syntax of written narrative prior to formal literacy instruction (Purcell-Gates, 1988, 1991a, 1992a).

The basic research needed into the relationship between parental literacy skill and use and children's ability to learn to read and write benefits from the above fields of knowledge and theory. From this emergent literacy perspective, we can begin to look for specific cognitive and linguistic concepts learned or not learned by children parents within the contexts of their homes. One obvious advantange of this approach is that by looking at children within their home contexts only, one can avoid the confounding of results with the effects of schooling. Also, we need to conduct this type of research before we design intervention programs for schools or homes. Auerbach (1989) cautions that home literacy interventions often ignore what actually goes on in the homes of children, imposing school practices into home contexts. She calls for a social-contextual approach to family literacy which builds on what families already do and provides opportunities for family literacy events centered around real life concerns and activities. In order to achieve this goal, she argues, one must first investigate home language use. This study does this with the additional focus on specific concepts about written language acquired by these children during the years preceding the onset of formal literacy instruction.

The relationship between specific concepts held about written language and success at learning to read and write has been addressed in a recent study of inner-city children's ways of making sense of beginning literacy instruction (K-1). This study concluded that those children who were most successful at learning to read and write in school began kindergarten with a greater degree of knowledge about written language (Purcell-Gates & Dahl, 1991). In particular, knowing the "big picture" about written language differentiated the successful from the less-successful children. Those who had the "big picture" demonstrated on pre-tests an understanding that print carries linguistic meaning and serves several real life functions for people.

The present study carried this investigation into the precursors of this written-language knowledge: the homes of the children. While we can speculate that those children who enter kindergarten knowing more about written language have experienced its use in their homes to a greater degree, this has yet to be explored. "Functional uses" of literacy are defined as instances where people use print, either reading or writing, "primarily to mediate domains of human activity rather than as an isolated skill" (Teale, 1986, pg. 184). That is they read or write to get things done instead of just for the sake of reading or writing as an end in itself. Thus, storybook reading is a functional use of literacy because it is participated in to achieve pleasure, create interactional bonds, and, perhaps, to find out about a topic of interest. Similarly, grocery lists are written to serve as memory aids while one shops for food.

Analysis of data from a recently concluded study underscores

the importance of functional use of print in the homes of young children (Purcell-Gates, 1991b, in press a, in press, b). This two-year ethnography of a non-literate mother and child, trying to learn to read and write through attendance at a university-based literacy center, highlights the crucial role played by functional use of literacy in the home. At the beginning of the study, no functional uses of print were occurring in the home (the father was also non-literate). For the child, who was in second grade at the onset of the study, written language was, phenomenologically, invisible as a semiotic system:

> Despite having attended one year of Head Start and first grade, he still did not possess rudimentary reading or writing skills. He could read nothing besides his name consistently, and could read the word the occasionally when prompted to remember. Observations of his behaviors in school and in the Literacy Center revealed that he never looked at print. It was almost as if he didn't notice it. It was not interpreted as meaningful for his work at school (1991b, pg. 9).

Although both the mother and child were receiving literacy instruction in schools other than the university-based literacy center, functional literacy use did not begin to appear in the home until personal reasons arose for it, suggested by the holistic, functionally-oriented instruction of the center. Letter writing was initiated by the mother when her husband began serving a prison sentence, and storybook reading began as the mother gained in her ability to read to her two children, and the child began to read to his younger brother, who in turn began to pretend read to his father, pointing to the memorized words as his father looked on. As functional literacy events emerged and developed within this home, both mother and child began to make rapid progress in the development of literacy skills (Purcell-Gates, in press a, in press, b).

The present study was designed to build on this case study, with its conclusion that until children experience functional uses of literacy within the meaningful contexts of their homes, they will find it difficult to integrate and benefit from the formal, structured literacy instruction they receive in school. A larger-scale descriptive ethnography was conducted within the homes of low-literate and literate adults with young children with the purpose of describing functional uses of literacy within the home. To more carefully specify the types and parameters of knowledge of written language learned by the children within their homes, measurement of this knowledge with tasks previously devised and used in a large-scale study on beginning reading and writing (Purcell-Gates & Dahl, 1991) was completed. To avoid the

confounding of SES with literacy skill acquisition (see previous discussion re poverty and learning to read and write), all informants were selected from urban, low-SES populations.

Guiding Research Questions:

1. What functional uses of print occur in the homes of parents with low-literacy skills and in the homes of parent who possess "functional literacy" skills (to be defined in "Subjects" section)?

2. What is the degree of knowledge of written language possessed by the children in these homes?

3. What relationships exist between functional uses of print in the homes of both low-literate and functionally literate parents and the degree of knowledge of written language possessed by the children in these homes?

Method

Design

The decision to answer the research questions with a decriptive ethnography was made in response to the very serious problems reported of previous methods for research into adult literacy levels and uses. Previously, most of this "research" was done using "self-report" techniques; adults were simply asked if they were literate. This data proved extremely unreliable and provided us no information on the sociocultural uses of print (Newman & Beverstock, 1991; Fingeret, 1987). Fingeret (1987) urges the increased use of ethnography in our research on adult literacy to provide insight into the perspective of the informants. She asserts that we need to answer the basic question of "What are the functions of literacy in the lives of nonliterate adults living in the U.S.?" (p. 1). A descriptive ethnography with quantitive measures will provide both breadth and depth to the results.

The design of this study is termed "descriptive ethnography" because it combines techniques used for descriptive studies with those used for true ethnographies (Kamil, Langer, & Shanahan, 1985). True descriptive studies are not ethnographies because they presuppose the existence of categories of interest. A descriptive researcher will enter the field and look for instances of behavior which fit categories which have already been established. An ethnography, on the other hand, must not presuppose findings to the extent of final categories of interest. An ethnographer enters the field, and by participating in the life of the culture and gaining access to insider informants, allows categories of interest to emerge from the data (Dobert, 1982; Goetz & Lecompte, 1984). The focus of an ethnography is constantly evolving from the continuous analysis of data. This is not true for the descriptive researcher.

This proposed study is a combination of these two. Functional uses of literacy have already emerged as significant categories of interest in previous research and this study used these as focal points of interest. On the other hand, given the importance of social and cultural perspectives to literacy research, this study was designed for the emergence of other categories of interest around occasions for literacy events. Only by entering the homes of the informants as participant observers, can the field researchers observe naturally occurring instances of literacy use. Simply asking the informants ('self-report') would not work due to (a) the notorious unreliability of self-report data and (2) the fact that many uses of literacy in homes and communities is not perceived by the participants as of interest or importance to literacy researchers (Taylor, 1982).

Participants

Informants were considered for the study if they met the following criteria: (1) They qualifed according to federal guidelines as low-socioeconomic; (2) They had at least one child in the home between the ages of 4-6 (3) they were either (a) non- or low-literate or (b) functionally literate; and (4) English was the primary language spoken in the home.

Twenty low-income families participated in this study with a total of 24 children. Ten of the families were African American, seven families were Caucasian, two were Hispanic, and one was Asian -American. This ethnic composition roughly represents the racial mix of the Boston/Cambridge metropolitan area with the exception of immigrant populations which speak languages other than English. All of the participating families spoke a dialect of American English in the home and all of the children possessed this dialect as one of their primary languages (they spoke it from birth). Non-English speakers and ESL children were purposely excluded from consideration for the study in order to avoid confounding the literacy measures with language/cultural issues.

The families were located through an intensive search for participants involving both family literacy and adult education programs and word-of-mouth communication. Initially, family literacy and adult education program directors were contacted and their cooperation was solicited for the purpose of locating potential participants. Once cooperation was agreed upon, a presentation was made to volunteer groups of parents (always mothers) by the principal researcher and one or more research assistants representing the ethnic make up of the parent group. All but two of these presentations resulted in at least one volunteer.

The project was described as a study of the ways in which young children learn in the home and family before they begin formal schooling. Care was taken not to mention reading and

writing as the focus of the observation. It was explained that a researcher would observe the child within the home over an extended period as he/she went about routine activities. The tasks measuring emergent literacy knowledge were presented as among the activities to be expected; they were described to the families as tasks/games to measure "different things" the children had learned. The stipend of $200 per family was also described. Anonymity was promised.

Aside from family literacy/ adult education contacts, participants for the study were also obtained from the partipating families who recommended acquaintances and neighbors. In one case, a participating parent helped us make contact with a local elementary school teacher who acted as a liaison for several families. The same procedure for explaining the study (see above) was used when single families were approached with the exception that the principal researcher was not involved. Families were solicited up until it became clear that the observation could not be completed in time for the results to be included in the final data analysis. At this time, the total of 20 families had been observed.

The judgements of low-literate and functionally literate were operationally defined for this study according to a socio-cultural perspective, using Kintgen, Kroll, and Rose's (1988, p. 263) definition of functional literacy:

> "...possession of, or access to, the competencies and information required to accomplish transactions entailing reading and writing [in] which an individual wishes -- or is compelled -- to engage."

A person was to be considered of non- or low-literate level of skill if this definition does not apply to them, i.e. they were unable to read and write that which they either wished to or were required to by employment or societal factors. The exception to this was to be those adults who were clearly functionally literate enough to transact with daily affairs and within a job but wished to extend their literacy to another field such as engineering or professional writing.

Debates over definitions of literacy are ongoing and concensus among literacy workers has yet to be achieved (Newman & Beverstock, 1991). It is not possible to set absolute boundaries for literate/nonliterate. However, many agree today that a definition which accounts for social-cultural factors and that "balances economic necessity and social pressure with personal desire and individual initiative" (Newman & Beverstock, 1991, pg. 41) is a major step forward.

Literacy level was ascertained through a combination of self-report and observational measures involving the reading and writing

of various real-life materials such as newspapers, recipes, forms required of various social agencies, and work-related items. Assignment to discrete literacy levels was accomplished by group evaluation of evidence. The evaluation group consisted of the project director and the research assistants.

Following this procedure, only three of the families in the study was judged to be low-literate. We found no nonliterate families. While this failure to include more low- or nonliterate homes was disappointing, the reasons for this were beyond our control. We were repeatedly told by adult program directors that virtually all of their low- and/or nonliterate clients were new immigrants who were not English speakers from birth (one of our criteria). In addition, native English speakers who are of limited literacy skill have reported that they tend to wait before enrolling in literacy programs until their youngest children are older and well-established in school (Wilkie, 1993). This obviously put them out of our pool of potential participants. Thus, the issue was one of access; we had no way of directly identifying and contacting more parents of low literacy ability within the time frame of the study.

The low socioeconomic status of the families was primarily established through self-report, with additional validation coming from observable factors such as residence in public housing projects, qualification for AFDC payments, and/or the qualification of their children for Head Start or free lunch. The federal guideline of a salary of $14,000 per year for a family of four was used in our questioning of parents who did not reside in public housing.

All of the families resided in the Greater Boston Metropolitan area. The cities represented included Boston, Cambridge, Brookline, and Sommerville. The majority of the families lived in federally-subsidized housing projects. One Caucasian family lived in a homeless shelter for part of the observation period. Often, households consisted of extended families, including parents of the participating parents, grown siblings and their children, and, on a rotating basis, cousins, and live-in partners.

One more characteristic of the pool of participating families needs to be mentioned. Clearly, obtaining families willing to participate in this study was extremely difficult. The families needed to be willing to allow a stranger into their homes for a period of from two-three months at all hours of the day and evening and all days of the week (see "Procedures" below). They were expected to "act naturally," going about their business as if no one was observing. While the stipend of $200 helped us gain cooperation, it was not enough to overcome the natural disinclinations of many of the people to whom we described the study. Those parents who did allow us access had to be of unusually trusting and open natures who felt confident enough in

themselves as people and parents to allow us in. These characteristics necessarily limit the generalizability of the results reported herein.

Table 1 displays basic information about the participating families: ethnicity, parent literacy level, sex of focal child, age of focal child, school level of focal child, and the sex and ages of other children living in the home. Please note that the names of the families given in Table 1 and throughout this report are assigned pseudonyms. More detailed descriptions of each family can be found in the Data Narratives to be found in Appendix A.

Table 1

Basic Information on Participating Families and Focal Children

Family Name	Ethnicity	Parent Literacy Level	Focal Child/ Age (Yrs)	FC School Level	Other Children/ Age
Anderson	Afr-Am	Functn'l	Female/ 4	Presch.	Male/ 10
Ambruster	Caucs'n	Functn'l	Female/ 6-7	1	Female/ 3
Augustine	Afr-Am	Functn'l	Female/ 6	1	Male/ 13 Male/ 10 Male/ 9 Male/ 9 Female/ 1
Bourne	Caucs'n	Functn'l	Female/ 4	Presch.	Male/ 2
Black	Afr-Am	Functn'l	Female/ 5 Male/ 5	K K	Male/ 9 Male/ 7
Cook	Afr-Am	Functn'l	Female/ 6 Female/ 5	K Presch.	Male/ 9
Cummings	Afr-Am	Low	Male/ 5	K	Female/ 3 Female/ 1
Ervin	Caucs'n	Functn'l	Male/ 5	Presch.	Female/ 7* Female/ 2* Male/ .5*
Ferris	Caucs'n	Low	Male/ 6-7 Female/ 5 Male/ 4	K K Presch.	Female/ 2

Table 1 Cont. on Next Page

Table 1 (Cont.)

Hart	Caucs'n	Functn'l	Male/ 5	K	Female/ 10
Howe	As'n-Am	Functn'l	Male/ 4	Presch.	Male/ 15
Jones	Afr-Am	Low	Male/ 5	K	Female/ 15
Kasten	Caucs'n	Functn'l	Female/ 5	K	Male/ 3
Lawrence	Hisp'nic	Functn'l	Male/ 6	K	Female/ 11 Male/ 3
Mathews	Caucs'n	Functn'l	Male/ 6	K	Male/ 3
Morley	Afr-Am	Functn'l	Male/ 5	K	------
Prince	Afr-Am	Functn'l	Female/ 6-7	K	Male/ 21 Male/ 18
Small	Afr-Am	Functn'l	Female/ 4	Presch.	-------
Valeri	His'pnic	Functn'l	Female/ 5	K	Male/ 7
Williams	Afr-Am	Functn'l	Female/ 4	K	Female/ 2 Male/ 3 Male/ nwbrn

*Children of sister of participating parent. Sister and children also lived in the home.

Procedures

Data Collection

Functional Uses of Print. To answer the research question of what functional uses of print occur in low socioeconomic homes of parents with low-literacy skills and in the homes of parents who possess "functional literacy" skills, researchers observed daily life activity within the homes. Each family was assigned one graduate-student research assistant as its researcher/ observer. In each case, the researcher was of the same ethnic heritage as the family to which she was assigned. This was purposely done to eliminate the additional discomfort associated with cultural incongruence between researcher and family and to increase the validation of the data collection and interpretation (Purcell-

Gates, 1993b). A total of six research assistants were responsible for the family observations.

Prior to data collection, each researcher visited the home for from two to five times, engaging in the same types of participant observation activities they would for the duration. Notes made during these visits were not included in the data set. When the researchers had determined that the family was familiar with them, had ceased to treat them as visitors, and had halted all "performance" behaviors, the subsequent field notes were treated as data. This "getting acquainted" time varied according to family and researcher. Each of the researchers reported a deep level of attained comfort with all of their families. More often than not, the researchers became quite close to the parents and children in their assigned families and expressed some degree of distress at having to leave them at the end of the observational period.

Observation for each family was spread over the hours of the day during which both the adults and children were awake and home and over the days of the week. The goal was to represent an aggregated "typical week" of activity for each family. To facilitate this, a grid was designed for each family with the seven days of the week represented in columns and daily time blocks represented in rows (See Appendix B). The researchers marked off the time blocks as they completed their observations. These grids were ultimately shared with families as researchers scheduled observations and attempted to complete the grid as fully as possible. None of the observations were completed in a sequential manner. Rather, the observations were spread over several months as observation times were scheduled to fit both researcher and family availability.

Payment of the stipend was withheld until the researcher had completed the observations to the satisfaction of the principal researcher, given the constraints of individual families. Since our focus was on the literacy events experienced by the focal children, observations took place only when the focal child was present and awake. Thus, no observations were conducted when the focal children were at school. All of the children were enrolled in some type of school program, preschool through first grade. The amount of time they were away from home for these programs varied which resulted in a variable total amount of observation across families.

Another factor which affected the amount of observation time per family was comfort level given the time of observation. For example, several families balked at allowing researchers into their homes early in the mornings beginning at wake-up time. This time period seemed to be the most private and personal to individuals. Our general stance was to push for the observation and to relinquish it only if we felt the relationship between the researcher and the family was threatened. Overall, the policy was

to insist on as much observation time as we felt we were able to get. Observation times per family are listed in Table 2.

Table 2

Total Observation Times Per Family

Family Name	Total Observation Time in Minutes
Anderson	3,030
Ambruster	2,985
Augustine	2,955
Bourne	1,935
Black	2,325
Cook	1,350
Cummings	1,055
Ervin	2,910
Ferris	2,520
Hart	1,125
Howe	1,425
Jones	1,675
Kasten	2,345
Larsen	2,165
Lawrence	2,040
Morley	1,870
Prince	3,300
Small	1,170
Valeri	1,090
Williams	2,265

The researchers assumed the role of participant observers in the homes, interfering as little as possible in the normal activities of the families while not assuming a completely passive posture (Spradley, 1980). Observations focused on all functional uses of literacy within the home context. This context was defined to include excursions to outside sites such as stores and social agencies whenever children accompanied the adult(s). One researcher accompanied her family to church, riding with them to and from. Several other researchers accompanied their focal children as they went to relatives and babysitters.

Researchers, in particular, did not initiate literacy events. At times, though, just their presence, along with the paper and pencils they brought with which to take notes, was enough to intiate requests from the children for paper and pencil for writing. Requests such as these, along with requests for bookreading by the children, were granted. However, the resultant

activities were not counted as data in the ensuing analysis (see below).

During the observations, the researchers noted all instances of uses of print by all those present in the home. They noted all activity which included print: reading; writing; looking at print (with no clear evidence that it was being read); and talking about print (e.g. talking about what a book had been about or reporting information previously found in a magazine). They also noted evidence of reading and writing by members of the family done at times prior to the observation. An example of this might be a letter ready to be mailed to a relative lying on the table. Through interactions with the adult(s) in the home, the researcher would attempt to ascertain who had written it. This information would be recorded in the field notes.

Along with each observed literacy event, the researchers noted the participant structure of the event -- who was involved and the roles each participant played. A estimation of the duration of each event was also noted.

Researchers also made note of all materials found in the home context related to literacy. These included books, printed notices, bills, signs, environmental print on household products, TV guides, and writing materials. Any instance of print in the home was documented. In addition, any print used by family members during the excursions outside of the homes were noted. Each observation of functional use of literacy included the following: (1) participants; (2) nature of activity (reading or writing, or both); (3) purpose; (4) materials used; (5) where and when it took place; and (6) approximate length of time.

Field notes comprised the main method of data collection. Samples of writing, drawing, or scribbling done by the focal child were also collected as artifacts to be used to help answer the second research question regarding knowledges about print held by the children.

At the end of the observation period with each family, the researchers presented family members with small "Thank You" gifts. Gifts of books and writing materials were made to the children in the family. At this time, the stipend of $200 was processed for each family.

Written Language Knowledge of Focal Children. To answer the research question regarding the extent and type of written language knowledge held by the focal children in the families, the researchers administered to each focal child a set of Written Language Assessment tasks (Purcell-Gates & Dahl, 1991). These tasks assess knowledge which has been shown to be related to success at learning to read and write in school. They were developed to provide a more in-depth view of written language

knowledge than can be gathered from the relatively limited assessment available from standardized readiness tests. The array of tasks were chosen to reflect knowledge which, although viewed theoretically as a whole, could be examined as different pieces and on different levels. They were designed to be used with children of this age and level of school experience:

1. Intentionality. Do the children understand that written language is a symbol system with linguistic meaning accessible to them (Harste, Woodward, & Burke, 1984)? To assess this, each child was presented with a sheet of 8 1/2" x 11" paper on which was typed in primary type the following sentence from a children's book: A long time ago there was an old man. The children were asked the following question: (1) Is there something on this paper? (b) What do you think it is? (c) What do you think it could be for? (d) Why do you think it could be there? (e) If the child answered with 'writing,' 'words,' or 'letters' but did not answer the other question, the researcher probed with "Have you ever seen writing (or words, or letters) before? What do you think it was for? Why do you think we have writing?"

2. Written register knowledge -- Do the children possess an implicit schema for the syntax, vocabulary, and cohesion characteristics of written narrative (Purcell-Gates, 1988)? To determine this, the children were asked to provide two types of language samples: (a) an oral narrative resulting from telling the researcher all about their latest birthday or other event, and (b) a written register narrative resulting from a pretend reading of a wordless picture book to a doll who is imagined to be a five-year old child being read to by the parent (the participant child). The children were offered a choice of a human girl doll or a teddy bear for the boy doll (we were unable to locate human boy dolls). African-American children were given Black girl dolls and nonAfrican-American's were given White girl dolls. The children were allowed to look through the book first to see what the story was as portrayed by the pictures. The researchers always read the title of the book to the children and helped them to begin with their pretend reading with the prompt, "Once upon a time...." They were reminded several times to "make it (the pretend reading) sound like a book story." The book chosen for this study was Lost! by David McPhail (1990). The story is set in Boston and is about a young boy who on his way to school befriends a very large bear who is lost. Together, they wander through familiar parts of Boston until the boy finally leads the bear back to the forest. The book was chosen because it is composed of page-sized pictures which tell the story. The few words on several pages were masked with white tape to make it a wordless book. A wordless picture narrative was needed for this task to forestall "refusals" by young children who, upon seeing words, state that they cannot read yet.

Using this measure, Purcell-Gates found that well-read-to children, prior to beginning formal literacy instruction,

implicitly "knew" the vocabulary, syntax, and cohesive devices peculiar to written stories (1988, 1991a, 1992a). This knowledge is crucial to the learning-to-read process, affecting word identification and comprehension (Leu, 1982).

3. Alphabetical Principle Knowledge -- Do the children understand that written English maps onto oral language alphabetically (embodies a grapheme/phoneme relationship)? This knowledge was measured by a variety of reading and writing tasks. A version of an environmental print reading task (Harste, Burke, & Woodward, 1984) was administered. Ten words were selected from salient environmental print in the homes and neighborhoods of the children and prepared in three different conditions: (a) full context (i.e., a real box of Tide); (b) two-dimensional, partial context (photo of the stylized print with immediate context of logo); and (c) completely decontextualized and typed onto a 5"x8" index card in primary type. The three conditions of presentation were presented on separate days and in different orders. The words used for this task were (a) Band-aid; (b) Burger King; (c) Coca-Cola; (d) Crest; (e) Doritos; (f) For Rent; (g) Hershey's; (h) Ivory; (g) Milk; (i) Tide.

Alphabetical Principle knowledge was also measured through a "Write Your Name and Anything Else You Can" task. The children were asked to write their names and anything else they could by the researcher who provided paper and pencil. They were then asked to read what they had written to the researcher who made note of their "reading" responses.

Finally, Alphabetical Principle knowledge was also measured via a short spelling task. The children were asked to spell 10 words reflecting simple consonant and vowel correspondences on paper provided by the researcher. The words they were asked to spell were bump, pink, drip, ask, bend, trap, net, chin, flop, and last.

4. Concepts of Writing -- How do the children conceptualize writing as a system (i.e., when asked to write anything they can, do they draw lines around the edges of the paper, draw pictures, write letters, or write words?) Data for measurement of this concept came from the "Write Your Name and Anything Else You Can" task.

5. Concepts About Print -- Do the children know the various conventions for reading and writing such as (a) front of book; (b) print, not pictures, tell the story, (c) first letters in a word; (d) big and little letters; (e) directionality; (f) concepts of letter and word; and (g) identification and functions of punctuation marks? Clay's Concepts About Print Test (1979) was administered to measure this knowledge. For this task, the children sat by the researcher who read a a simple children's book to them, asking them questions relevant to the various concepts about print during the course of the reading.

For each child, the Intentionality task was the first administered to avoid teaching the concept through the other tasks. All task administration sessions were audiotaped and transcripts derived for the analysis.

In addition to the above formal measures of written language knowledge, all instances and resulting samples of naturally occuring literacy events involving the focal children and noted by the researcher were considered data for this research question. Thus, for example, if a child spontaneously jotted a message onto a piece of paper as part of a functional literacy event, this writing was used to assess the knowledge domains of Intentionality, Alphabetical Principle, and Concepts of Writing.

Accounting for school curriculum. Since all of the focal children were involved in some form of schooling, we contacted their teachers for a verbal description of the literacy concepts taught in the different programs.

To ensure uniformity of data collection procedures across the different sites, weekly research meetings were held for the duration of the data collection period. At these meetings, language to be used in common for explaining the purpose of the observations and to answer queries from participating families was developed. Ways of responding to threats to validity of the data (such as requests for literacy materials from children) were developed and commonly agreed upon. Data collection problems were solicited and solutions were arrived at together, with the expectation that all of the researchers would apply those solutions if similar problems arose. What counted as "data" (i.e. what counted as a literacy event) was defined and expanded upon until the issue no longer arose. Protocols for administering the written language knowlege tasks were gone over and explained to all researchers.

At these meetings, researchers would provide updates of their ongoing observations, raising questions, providing illustrations, recounting procedural frustrations. These weekly meetings were invaluable to the researchers and the principal researcher as they struggled with issues which naturally arise in naturalistic studies such as this -- issues such as cultural practices and researchers' personal responses to parenting styles, work ethics, etc. (Purcell-Gates, 1994).

Data Analysis

Coding

Literacy events. Coding of the field notes began near the end of the data collection period. Codes were derived directly from the data. We first created a list of all types of literacy events observed across the families by all of the researchers. These

events filled large sheets of poster paper which were taped upon the walls of the room devoted to the research meetings. After all of the different types of literacy events had been elicited and recorded, we worked as a group to collapse the discrete types in larger categories. For example, Reading Print on Valentine's Card and Reading Print on Birthday Card events were distilled to the category of Reading Print on Greeting Cards.

Over a period of several weeks, we distilled the discrete events into discrete categories. When we felt that we could combine no more events into one, we assigned codes to the resultant categories of literacy events. These codes each were preceded with a letter which stood for the activities of (1) Read ('R'), (2) Write ('W'), (3) Talk ('T'), (4) Choose ('Ch'), (5) Draw ('D'), (6) Look At ('L'), (7) Play With ('P'), or (8) On the Phone (Ph'). See Appendix C for a copy of the Coding Sheet, listing codes and the literacy event for which they stood.

The rationale for including events which went beyond actual reading and writing was to remain as true as possible to real-world activities with which print was intertwined. Drawing by young children was considered a form of literacy event, reflecting the theoretical stance that drawing and pictures are the earlier symbolic systems which developmentally precede the representation of linear language with print (Dyson, 1989). As described below, not all of these codes were used for all levels of analysis.

Participant Structures. A family-relationship tree map was created for each family, illustrating relationships of all family members mentioned in the field notes. Codes for Participant Structures were then created. These codes denoted the relationship of each person involved in a literacy event to the focal child. Thus, for example, we had Mother ('M'), Father Residing in the Focal Child's Home ('Fr'), Father Vising at the Focal Child's Home ('Fv'), Cousin ('C'), or Friend of Focal Child ('FOC'). The full range of participant structure codes can be found in Appendix D.

Data Narratives. Researchers were also asked to prepare a data narrative of each of their families. They were told that the narrative should center around a description of the family/ home as a place for literacy. Nonliteracy information was to be included only to give a general picture of what daily life was like for members of the home/ family. The focus of the data narratives was to be a 'word picture' of the family as users of print. These data narratives served as wholistic versions of the data on the family level which was subsequently broken up by the coding. Data narratives for each family are compiled in Appendix A.

Following the establishment of the codes, all field note data was coded for (1) literacy event type, and (2) participant structure. Every literacy event code was followed by a colon (:) and a participant structure code. If two people were engaging in

the event together, the participant codes were separated by a comma. For example, if the mother and focal child were talking about a book they had just read, the total code would be thus: TBR: M,FC. If one person was reading to, writing for, or requesting something of another person, the code for the person who was reading, writing, or requesting was written first. This code was followed by a slash (/), and the slash was followed by the code of the person being read to, written for, or requested of. For example, if a mother was reading a book to the focal child, the total code would be thus: RBS: M/FC.

At this point, we determined that the indications of duration of event were not done uniformly enough to warrant inclusion in further analysis.

Three graduate students coded the field notes, after training and practice with the principal researcher. None of the coders were involved in the collection of data, as the term had ended and the field researchers had all graduated and most had left the area. Two field researchers remained during this period and were involved in additional field work. They were available to the coders, though, for confirmation on field notes and input regarding contextual factors.

Social Domain. Aside from "type of event", the literacy events were also coded along two other dimensions: (a) social domain mediated by the literacy event; and (2) text level involved in the literacy event. For these last two dimensions, only those literacy events involving actual reading and writing were considered and coded.

The categories of social domains mediated by the literacy events were taken from Teale's (1986) landmark study of low-income families in San Diego and the ways in which print mediated their everyday lives. The present study replicated Teale's quite closely in terms of methodology and focus. However, it expands upon it by measuring presumed effects of literacy home use on the written language knowledge of young children. In order to build upon the Teale study and to compare across studies, we coded our literacy events according to the domains of social activity he found in his homes. Those domains include:

> **Daily Living Routines:** Shopping, cooking, paying bills, maintaining welfare assistance, washing closthes, getting autos and other items repaired, traveling from one place to another.
>
> **Entertainment:** Reading a novel, doing a crossword, reading a TV Guide, reading rules for a game, reading print on TV screen, reading ads for a movie.

School-Related Activity: school communications, homework, playing school, reading the school-lunch menu in the newspaper.

Work: literacy for performing one's actual job, for maintaining or securing a job.

Religion: Bible reading, Bible study guides, reading pamphlets brought home from church or Sunday school, reading Bible stories.

Interpersonal Communication: sending cards, writing and reading letters.

Participating in an "Information Network": reading to gain information that might be used later in discussions with people.

Storybook Time: Reading a story and/or book to a child.

Literacy for the Sake of Teaching/ Learning Literacy: To help another person learn to read and write (which is not part of homework).

Text Level. Finally, the level of text read or written within each literacy event was coded to examine a possible relationship between the complexity and degree of "writtenness" of the print being read and children's acquisition of written language concepts. This analysis was performed to try to move beyond a simple counting of literacy events to a more qualitative look at differences between reading and writing activities.

Previous studies (Teale, 1986; Taylor & Dorsey-Gaines, 1988) have documented that children from low-income homes experience many uses in print in their daily lives. However, they, as a group, continue to achieve at lower levels of literacy skill than do children from mainstream homes. One of the factors differentiating the two socioeconomic groups is degree of education of the parents. This would presumably affect the nature of the print being read and written in the homes since it is related to literacy skill, i.e. the more literate one is, the more one is able to, and inclined to, read more complex written language. Teale, in fact, found that the low-SES parents in his study read and wrote mainly as part of their daily living routines and did relatively little storybook reading. Taylor, in her study of middle-class, educated families, found a plethora of reading and writing of complex text such as storybooks, magazines, encyclopedias, etc.

Considered from this perspective, an analysis of the relationship between text levels involved in home literacy events

and the acquisition of written language concepts would allow us to look at -- from another angle-- the relationship between parents' literacy levels and children's ability to learn to read and write in school as operationalized in this study (i.e. from the emergent literacy end). Since we had such difficulty locating low- or nonliterate parents for this study, we viewed the text level analysis as another attempt at looking at this issue.

To establish codes for the Text Level analysis, we placed the texts being read or written along a continuum of complexity and intensity of features commonly associated with written language. These categories arose directly from the data for this study. The first three categories of text level reflected language limited to the clausal level or smaller/ less. The next four categories were classified as levels of <u>discourse</u>, defined as language texts, or units, which extend beyond the level of the sentence or single clause (Stubbs, 1983). Within the discourse levels, the text was categorized according to the degree to which features which characterize written text were employed. In particular, these features were those reflecting spatial and temporal commonality, interaction, concreteness of referents, degree of contextualization/ decontextualization (Chafe & Danielewicz, 1987; Rubin, 1978). (See preceding discussion under "Review of Relevant Literature".) The following codes for text level resulted, from simple to complex and, within the discourse levels, from less written-like to most written-like (which also involves an increase in complexity of syntax and more specialized vocabulary):

LETTER: Individualized alphabet letters

WORD: individual words; includes individual names

CLAUSAL/PHRASAL: Individual phrases and/or clauses; includes single sentences. Often found on coupons, in classified ads, on food packaging

<u>DISCOURSE</u>: Text which goes beyond the one-sentence (clause) level

DISCOURSE 1: Personal letters, memos, notes, etc.

DISCOURSE 2: Comic books, cartoons

DISCOURSE 3: Children's story books, some text on food containers.

DISCOURSE 4: Adult books, magazine articles, newspaper articles, business/ institutional letters (nonpersonal); documents

For this round of coding, all literacy events coded as "pretend reading," "reading scribbles," and "writing scribbles" were eliminated. We also eliminated print which constituted part of school homework because we were trying to capture reading and writing which was functional and independently engaged in by family members -- not assigned.

Reliability of Literacy Event/ Participant Structure Coding. Reliability of coding for literacy event and for participant structure was assessed by recoding each field note by a second coder and calculating the degree of agreement between first and second coder. Interrater agreement was 85% for literacy events and 85% for participant structures.

Tasks Assessing Written Language Knowledge

The children's responses to the tasks designed to assess varying dimensions of knowledge about written language were scored according to protocols established by Purcell-Gates and Dahl (1991):

1. Intentionality. The children's responses to the questions about the print on the piece of paper ("What do you think it is?" "What do you think it is for?") were rated according to categories of response established by Purcell-Gates and Dahl (1991):

> 1 = No Evidence of Concept (letter-label response, i.e., naming letters or saying they were letters with unsatisfactory or no response to probes)
>
> 2 = School-Related Objects (responses reflecting a limited functional view of writing as something that belongs in school, much like desks or chairs, i.e., when asked for reasons for "letters" or "words," they replied that they are for school, for teachers, to learn how to go to school, to know the alphabet, etc.)
>
> 3 = Names as Labels (responses which indicated a limited by personal functional view of writing -- writing is for writing names)
>
> 4 = Marks Seen on Objects in the Environment (responses which reflected a broader functional view of writing but still one mainly as labels or "markers," i.e., "for toys and games" or "at the store")
>
> 5 = Print is Meaningful or Evidence of Concept

of Intentionality of Written Language (responses containing examples of functions of print such as writing a letter or giving directions, or reading attempts)

2. Written Register. The children's responses to this task of telling about an event and pretend reading to a doll were scored according the protocol established by Purcell-Gates (1988) and used for several subsequent studies (Purcell-Gates & Dahl, 1991; Dahl & Freppon, in press). Transcripts of the two elicited narratives (oral and written registers) for each child were prepared and coded for features associated with differences between oral and written narratives. These features were (a) participles; (b) attributive adjectives; (c) conjoined phrases; (d) series; (e) sequences of prepositional phrases; (f) relative clauses; (g) adverbial clauses; (h) -ly adverbs; (i) literary words and phrases; (j) literary word order; (k) direct quotes; (l) sound effects; (n) exophoric reference. All of these features except exophoric reference have been found to occur with greater frequency in written text, while exophoric references are permissable only in oral exchange. Scoring resulted in a total score for each child which represented both frequency of use of narrative features and number of features showing the expected increase or decrease (depth and breadth of knowledge).

3. Alphabetic Principle. The reading and writing attempts by the children for the "Write Your Name and Anything Else You Can" task, the "Environmental Print Reading" task, and the spelling test were scored on a 3-point scale:

1 = No Evidence of the Alphabetic Principle

2 = Some Evidence (2-3 instances within the data)

3 = a consistent pattern (4 or more instances)

Scores were averaged across all reading and writing tasks to result in one score for this concept.

4. Concepts of Writing. The children's responses to the "Write Your Name and Anything Else You Can" task were scored with the following scale, reflecting the nature of their conceptualization of writing as a system and how close that conceptualization is to conventional:

1 = Writing is Drawing (line borders, picture-like scribbles, pictures, shapes)

2 = Writing is Scribbles (writing-like scribble, scribbles)

3 = Writing Involves Letter-like and Number-like Forms (scribbles with letters, letter-like, and number-like forms)

4 = Writing is Letters Mixed with Numbers (pictures with embedded print; letters with numbers, strings of numbers)

5 = Writing is Making Letters (ungrouped letters, letter strings)

6 = Writing is Making Words (pseudowords, words)

A total score was attained for each child for this concept by scoring each writing display and averaging the scores.

5. Concepts About Print. This task was scored according to Clay's standardized procedures (1979).

Following the scoring of the task data, all of the field notes were reviewed for literacy events involving the focal child. These events were judged for evidence of any of the above concepts about written language. If the event was judged to display knowledge of particular concept, then a decision was made as to the score that child would receive for this concept based on the evidence in the field note. This procedure was particularly effective in raising the scores of many children for the Intentionality concept. Other concepts affected by this procedure for some children were Alphabetic Principle (evidence garnered mainly from literacy artifacts), and Concepts About Writing.

Reliability of task scoring. Reliability for scoring of the written language tasks, as well as the evidence found in the field notes, was accomplished by two research assistants and the principal researcher scoring the tasks together, resolving all differences of a 100 percent agreement. The exception to this was the scoring of the Written Register transcripts which was done by the principal researcher alone. One-third of the transcripts were then randomly chosen and rescored by a trained colleague. Agreement was checked with a pearson-product moment test with r = .91.

Relationships Between Uses of Print in Home and Children's Knowledge of Written Language

To facilitate the analysis of the relationships between uses of print in the home and children's knowledge of written language, all of the data were entered into a computer spread sheet program. Factors entered into the database were family; parent literacy level; parent involvement in adult basic ed program, family literacy program, or no program; focal child; education level of

focal child; literacy events; domains; text levels; and task scores. Each family's total minutes of observation were calculatated and entered into the database. Frequencies of literacy event occurences as well as domains and text levels were then calculated as proportions according to total minutes observed.

Total and average frequencies and standard deviations were computed for literacy events, domains, and text levels. Mean scores and standard deviations were also calculated for the written language knowledge concepts. Simple correlations were run for relationships between task scores and literacy events, domains, and text levels. We also manipulated the correlation calculations to reflect child's schooling level and parent literacy level.

Results

All of the following reported results are based on frequency per hour observed for each family. Across all of the calculations, one family (the "Hart" family) stood out as different from the rest, with significantly more instances of literacy use and of child-centered literacy use per hour observed. Because the sample for this study was not randomly chosen, we cannot strictly consider the one different family as a statistical outlier. It may very well be that, given a true random sample of low-income families, this family would lie on one end of a normal curve along those factors of interest to this study. However, given it's extreme distance from the other 19 families in the sample along most of dimensions measured, we have caluculated, and will present, results, in those instances where a real difference occurs, with and without this one family.

Literacy Events

Literacy Event Frequencies Across Families

The average occurrence rate for all literacy events, as defined above, was 1.16 per hour of observation across all of the families. For actual reading and writing events, as defined above, the average rate per hour of observation was .76. Excluding the Harts, the average rates were .95 and .58 respectively. Table 3 displays these results with standard deviations.

Table 3

Average Frequency of Literacy Events Across Families Per Hour of Observation

Literacy Events	N	Mean	SD
All Events	20	1.16	1.05
w/o Hart	19	.95	.51
Reading/Writing Only	20	.76	.88
w/o Hart	19	.58	.34

The range of total literacy events in these low-SES homes ranged from .17 to 5.07 per hour observed. For reading and writing events only, the range was from .04 to 4.21. Figures 2 and 3 graphically display the range in frequencies for literacy events and reading and writing only literacy events across all of the families, from low to high.

Literacy Event Frequencies for Low-Literate and Literate Families

Low literate homes had half as many total literacy events as did the literate homes. Considering only reading and writing events, the literate homes had more than six times as many events as the low literate ones, which averaged only about one-tenth of a reading or writing event per hour. Table 4 displays these results.

Table 4

Means and Standard Deviations of Literacy Events for Low- and Functionally-Literate Families (N=24)

	Home Literacy Level			
	Low		Literate	
Literacy Events	$\bar{X}$	SD	$\bar{X}$	SD
Total	.46	.27	1.28	1.06
w/o Hart			1.05	.50
Reading/Writing	.13	.19	.86	.89
w/o Hart			.65	.31

Social Domains Mediated By Print

Using the social domains found by Teale (1986) to be mediated by print in the low-SES families he studied, we found slighltly different distributions and proportions across the domains. We found that literacy mediated the domain of Entertainment to the highest degree across the families ($\bar{X}$ = .178 per hour observed) with the domain of Daily Living Routine as a close second ($\bar{X}$ = .175). Teale found the same two domains as those most frequently mediated by print but in the opposite order. An important difference between the two studies lies in the amount of storybook reading in the homes. Teale found this domain to be the least frequently occurring, while we found more ($\bar{X}$ = .087). See Table 5 for the means and standard deviations of the frequency calculations for the present study as compared to the Means for the Teale study (his standard deviations were not available).

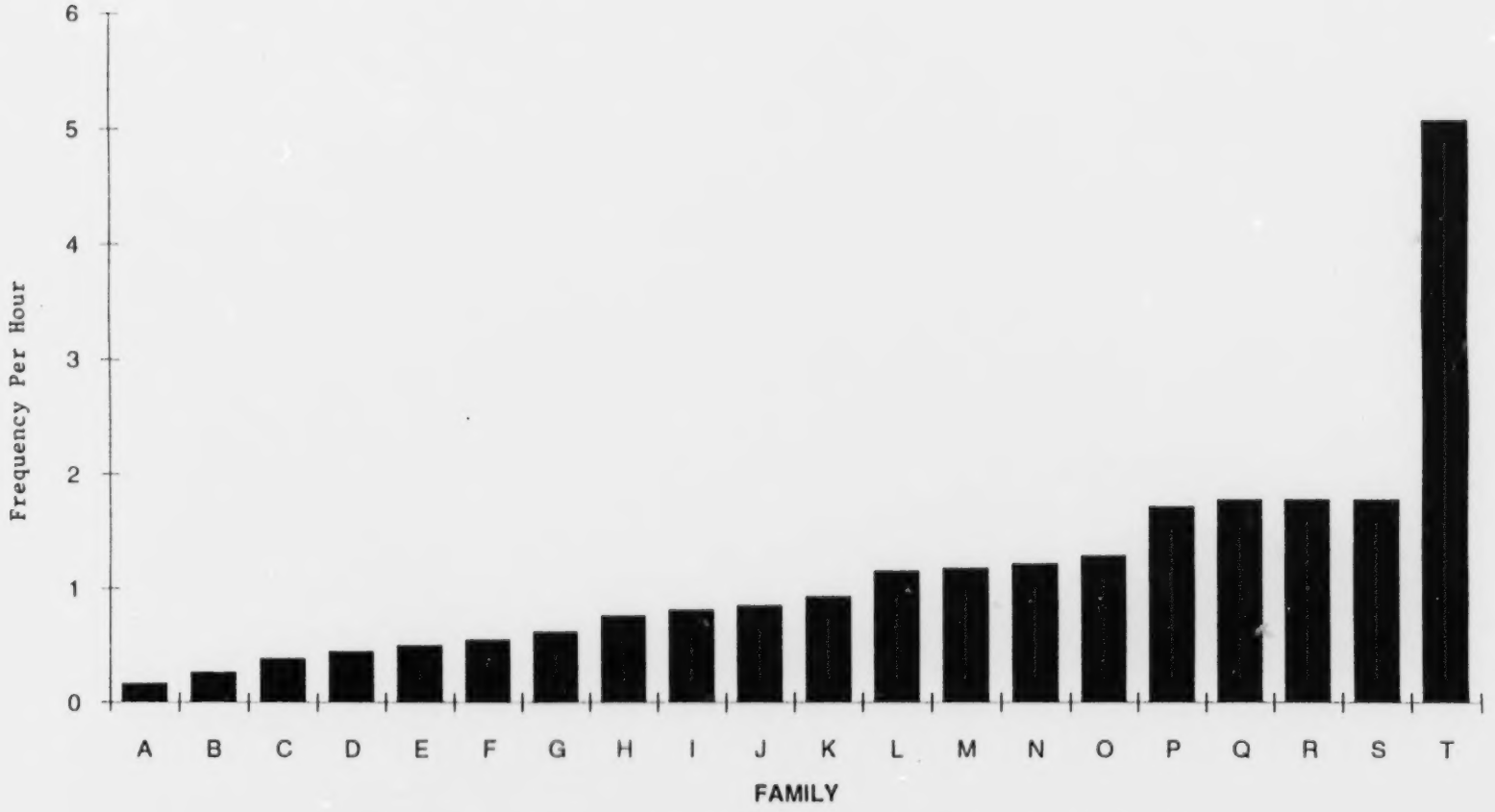

Figure 2. Range of frequency of total literacy events per hour across all families.

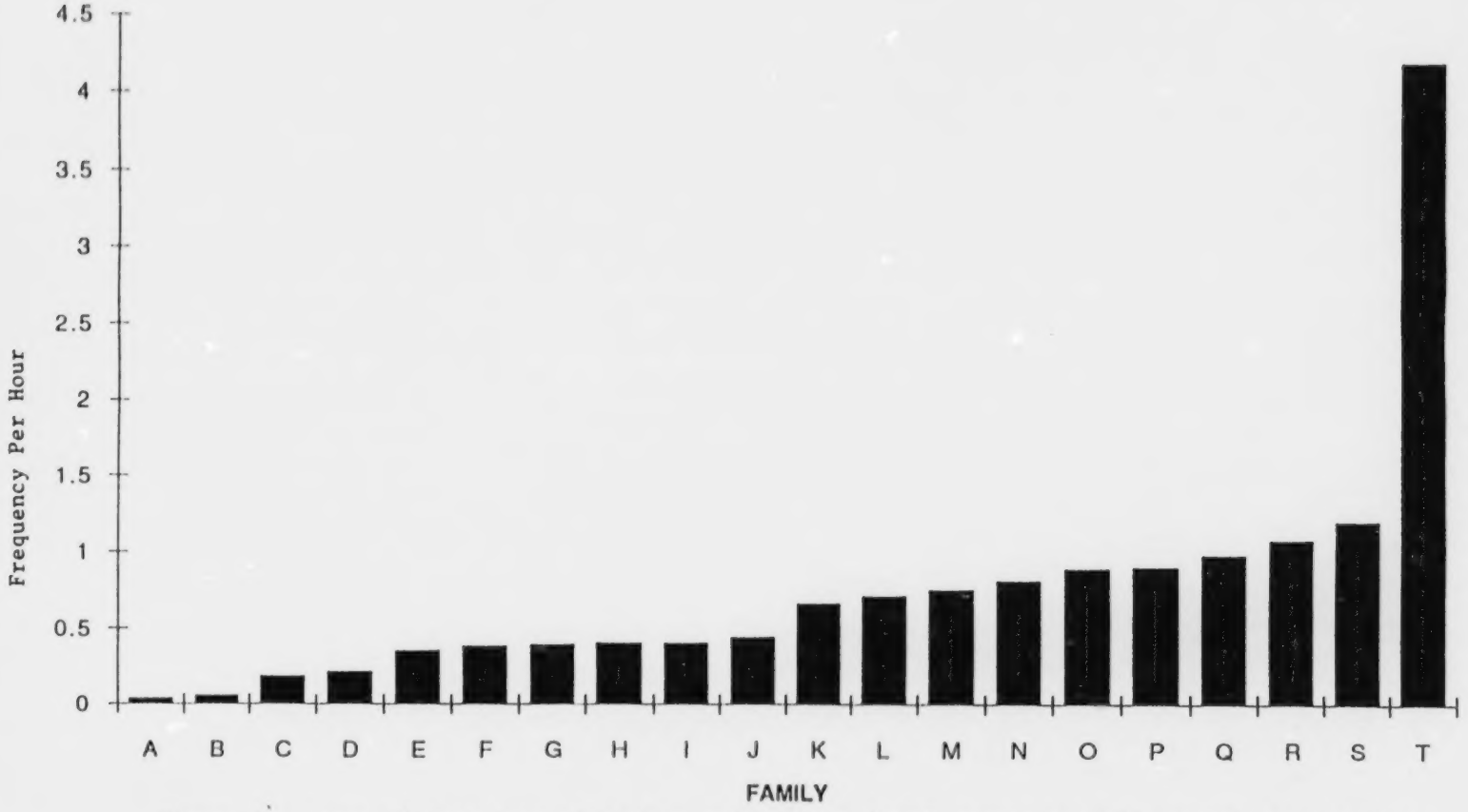

Figure 3. Range of frequency of reading and writing (only) events per hour across all families.

Table 5

Means and Standard Deviations for Frequencies of Literacy Events By Social Domain (N=24) as Compared To Teale's Findings

	Study		
	Purcell-Gates		Teale
Domain	Mean	SD	Mean
Entertainment	.178	.179	.157
Daily Living Routine	.174	.122	.168
Literacy for sake of teaching/ learning literacy	.113	.254	.130
w/o Hart	.057	.076	
School-Related	.097	.121	.074
Storybook Time	.086	.219	.006
w/o Hart	.038	.058	
Interpersonal Communication	.068	.053	.023
Religion	.036	.021	.025
Information Network	.014	.021	.060
Work	.004	.012	.015

Figure 4 displays the range of average occurrences of reading and writing events across the domains.

We also calculated the proportion of the total reading/ writing literacy events frequencies which accounted for each domain. Table 6 displays these proportions averaged across families and compared to Teale's findings.

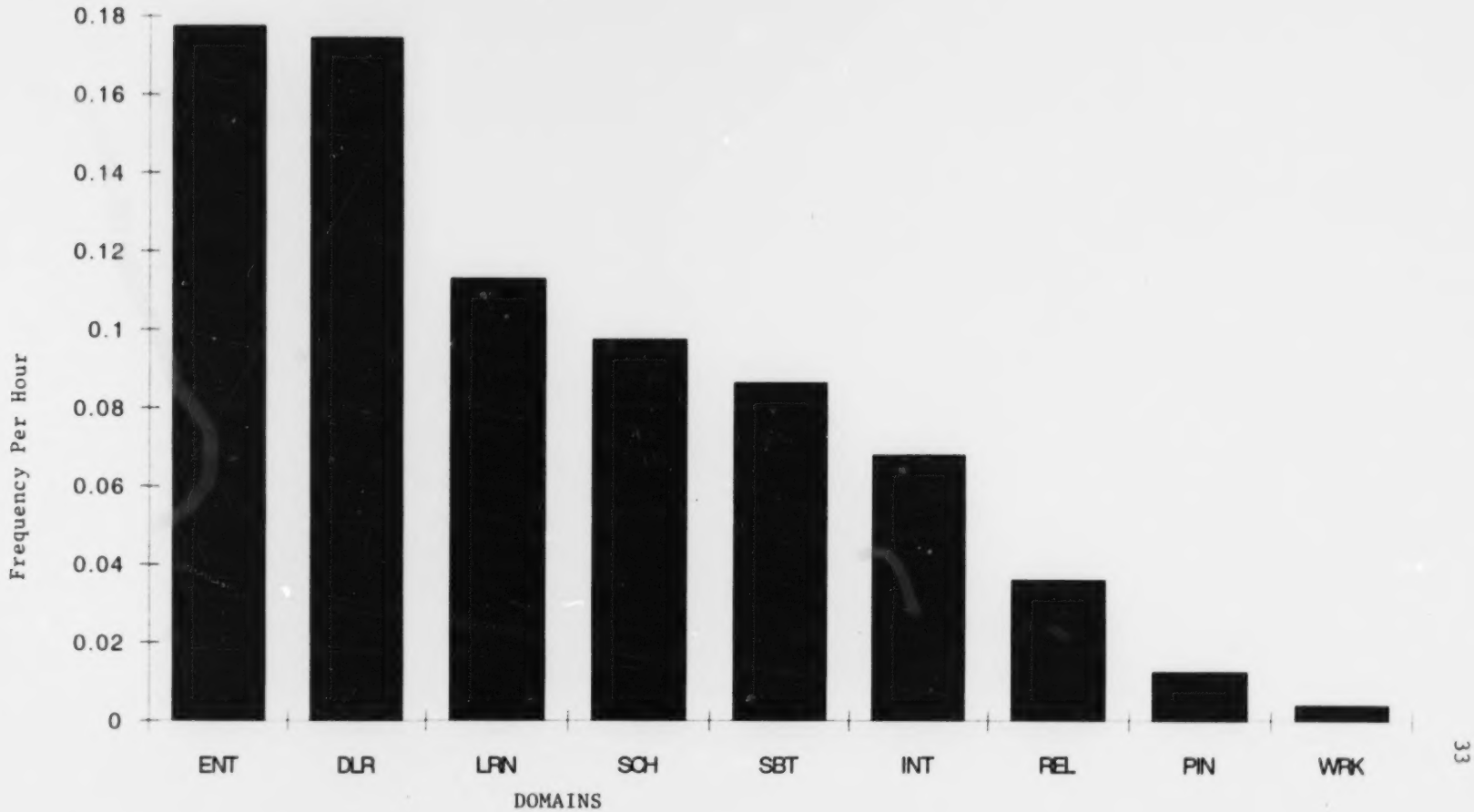

Figure 4. Range of average occurrences of reading and writing events across social domains.

Table 6

Average Proportions of Occurrences of Reading/ Writing Events Per Hour For Each Social Domain Mediated by Print (N=24) Compared to Teal's Findings

	Study	
	Purcell-Gates	Teale
Domain	%	%
Daily Living Routine	32.3	25.5
Entertainment	25.8	23.8
School-Related	12.3	11.2
Interpersonal Communication	10.5	3.5
Literacy for sake of teaching/learning literacy	9.1	19.8
Storybook Time	5.8	.9
Religion	2.1	3.8
Information Network	1.5	9.1
Work	.8	2.3

Beyond the small differences, Teale found proportionately more of the literacy events mediating the domains of Information Network, Literacy for the sake of teaching/ learning literacy, and work while we found proportionately more literacy events devoted to Storybook Time and Interpersonal Communication.

Figure 5 displays the range of the average family proportion of reading and writing events across the domains for this study.

Text Levels

Text Levels Across Families. From the analysis for the level of texts being used in the homes, we get a picture of people reading and writing mainly at the clausal/phrasal level. This was

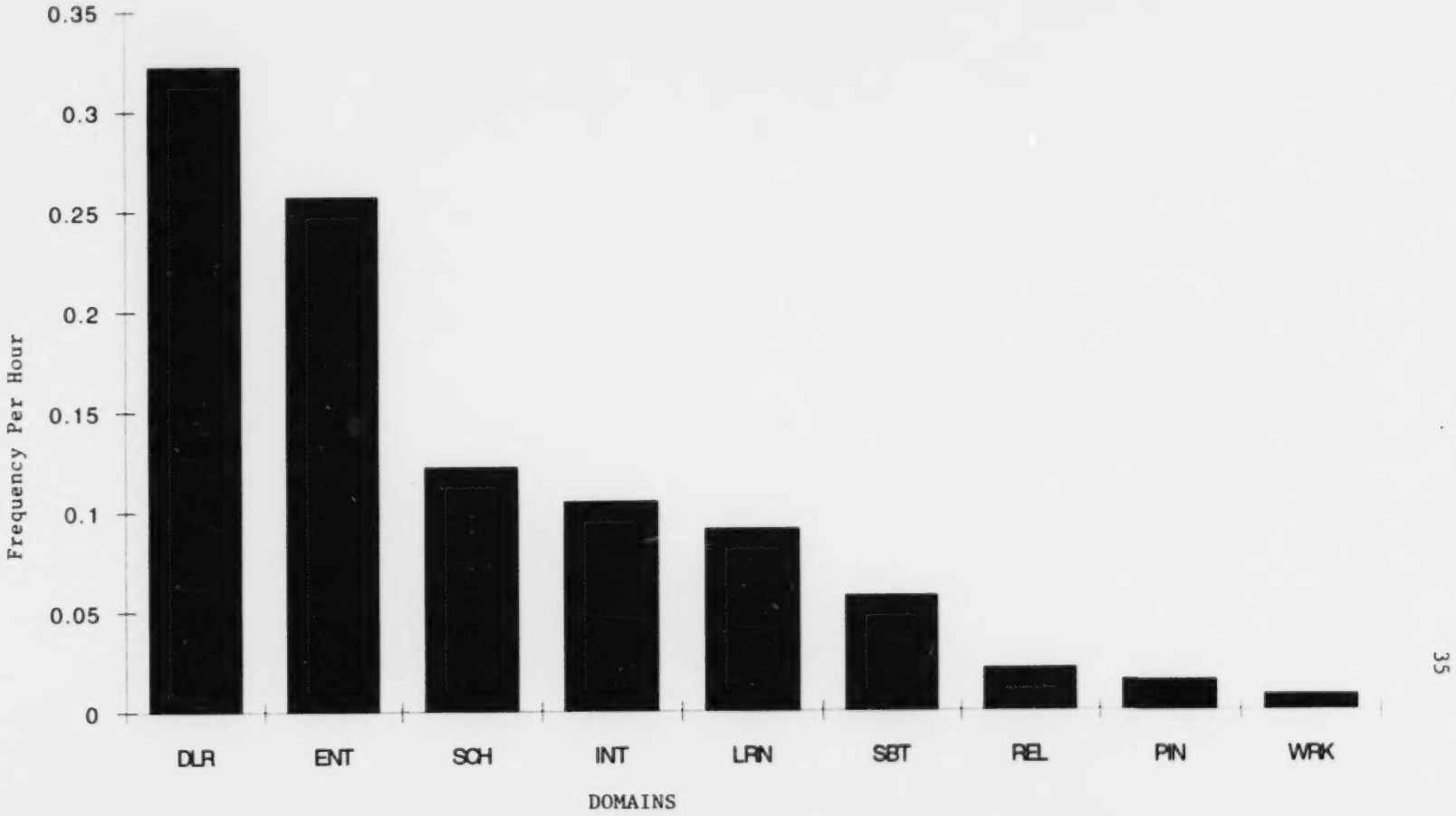

Figure 5. Range of average family proportions of reading and writing events mediating the different social domains.

the level involved in coupons, ads, some container text, and so on. The next most heavily utilized level is that of Discourse 4, the most complex and most "written" of the texts. We found the least number of instances at the letter level. The numbers reveal, though, the influence of the Hart family literacy practices on these findings. Their heavy activities at the word and storybook levels, significantly changed the frequency of occurrences within these levels. Table 7 displays the means and standard deviations for the text level analysis across families.

Table 7

Means and Standard Deviations of Occurrences of Text Levels Employed in Reading and Writing Events N=24)

Text Level	Mean	SD
Letter	.033	.058
Word	.207	.338
w/o Hart	.131	.078
Clause/Phrase	.209	.141
Discourse 1	.034	.047
Discourse 2	.005	.011
Discourse 3	.137	.378
w/o Hart	.052	.061
Discourse 4	.142	.113

Figure 6 graphically portrays the ways in which the uses of the different text levels broke down across families.

Low Literate and Literate Uses of Text Levels. One would hypothesize that low literate families would read and write texts at levels different from those of literate families. Analyses seems to affirm this, somewhat. The text-level differences between the two groups is greatest at the higher discourse levels and smallest at the everyday, less complex levels. Focus on the word level, which was usually part of a learning activity, also showed a big variation between the low literate and literate families. Overall, across all of the text levels, the frequencies reflect the

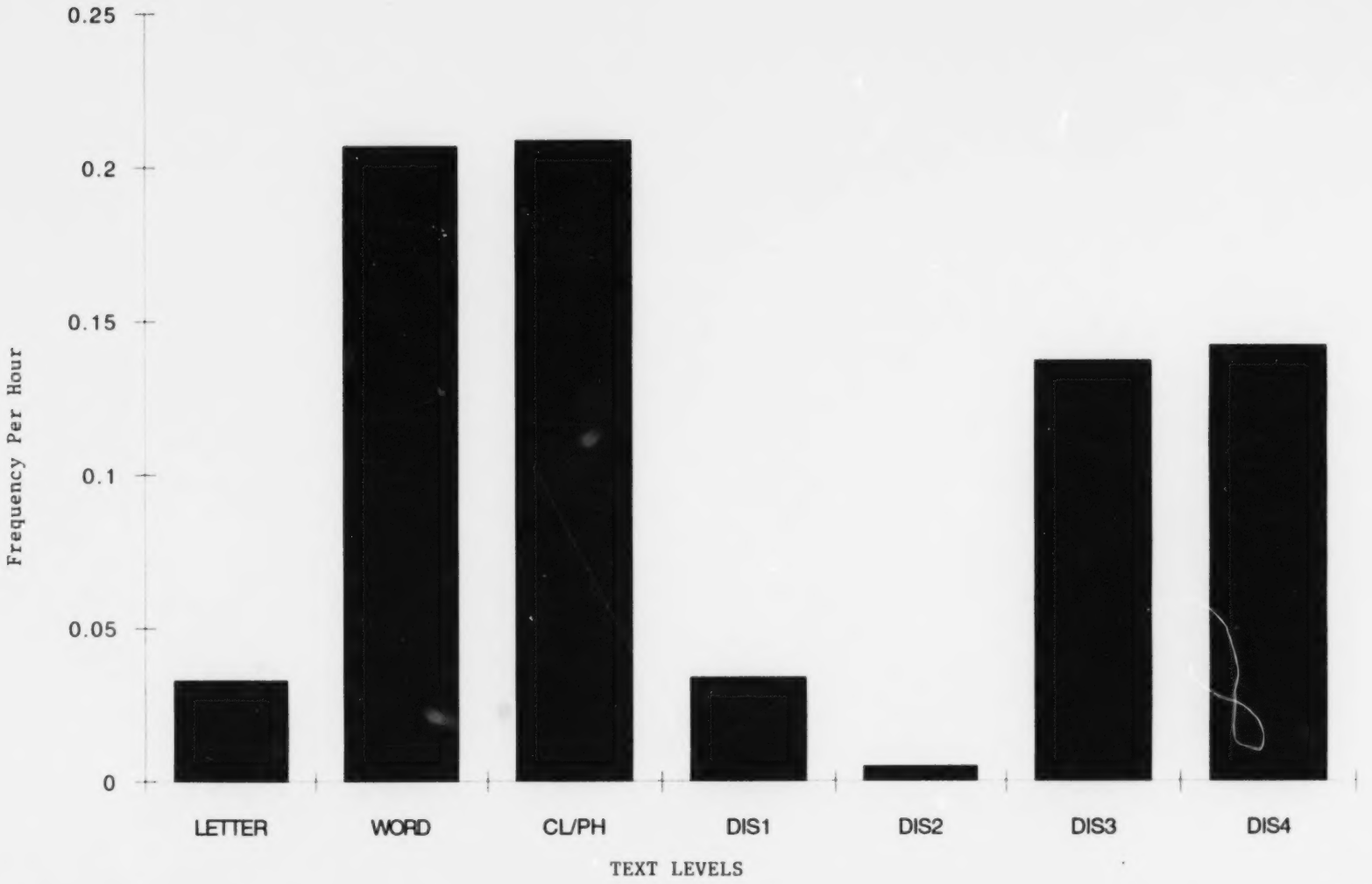

Figure 6. Frequencies of reading and writing events at different text levels across all families.

lower total frequencies of reading and writing events among the low literate families. Table 8 reflects this analysis.

Table 8

Reading and Writing at Different Text Levels By Low Literate and Literate Families

	Literacy Level			
	Low (n=3)		Literate (n=17)	
Text Level	$\bar{X}$	SD	$\bar{X}$	SD
Letter	0.00	0.00	.04	.06
Word	.04	.04	.24	.37
w/o Hart			.15	.07
Clausal/Phrasal	.09	.04	.23	.15
Discourse 1	.02	.04	.04	.05
Discourse 2	0.00	0.00	.01	.01
Discourse 3	.01	.01	.16	.42
w/o Hart			.06	.07
Discourse 4	.05	.10	.16	.11

Written Language Knowledge of Children

The results of the scoring of the children's responses to the tasks designed to measure knowledge of written language by the children, combined with the naturally occuring data judged to reveal such knowledge, resulted in individual scores for each focal child along the knowledge dimensions of Intentionality, Alphabetic Principle, Written Register, Concepts About Print, and Concepts of Writing. Across the families, the profile is one which reveals a near complete understanding that print is linguistically meaningful (Intentionality). In general, the children have some inkling that print maps onto speech at the phoneme level (Alphabetic Principle), but they have not fully grasped this concept yet. They know that

the syntax, vocabulary, and reference conventions (to reflect the decontextualized nature of written language) of written storybook language is different from speech on a simple level. However, they do not possess the depth and breadth of this knowledge as Purcell-Gates' (1988) earlier sample of well-read-to children who's average score was 42.55. However, the children's average score of 24.53 was similar to those of other low-SES children on this task in the Purcell-Gates and Dahl study (1991) and the Dahl and Freppon study (in press). The children, on average, scored below average in Concepts About Print Knowledge, and they, overall, did not totally grasp the notion of writing as composed of letters arranged in a linear fashion. Results of the written language knowledge tasks can be seen in Table 9.

Table 9

Means and Standard Deviations of Scores for the Tasks Measuring Written Language Knowledge Held by the Focal Children (N=24)

Task	Mean	SD
Intentionality (Range = 1-5)	4.35	.76
Alphabetic Principle (Range = 1-3)	1.46	.68
Written Register (Sample Range = 0-64)	24.53	14.52
Concepts About Print Raw Score (Range = 0-24)	8.13	4.99
Concepts About Print Stanine (Range = 1-9)	3.58	1.50
Concepts of Writing (Range = 1-6)	4.17	1.19

Relationships Between Home Literacy and Children's Knowledge About Written Language

The questions regarding possible relationships between the frequency and nature of naturally occurring literacy events in the home and young children's knowledge about written language was answered through correlations and comparative statistics. Only those correlations which were indicative of a relationship are

reported here. Thus, one may conclude that all other correlations not reported were nonsignificant.

Correlations Between Tasks

The interrelatedness between the different dimensions of written language knowledge measured by the tasks in this study are clear from the intercorrelations reported in Table 10. Only knowledge of Written Register remains unrelated to the other dimensions.

Table 10

Correlations Between the Scores on the Tasks of Written Language Knowledge (N=24)

Tasks	r	p≤
Concepts About Print w/ Alphabetic Principle	.51	.01
Concepts About Print w/ Intentionality	.43	.03
Concepts About Print w/ Concepts of Writing	.73	.0001
Concepts of Writing w/ Alphabetic Principle	.50	.01

Correlations Between Tasks and Schooling

A review of the curriculums of the educational programs in which the focal children were involved revealed the expected presence of many of the concepts we were measuring. This was particularly true in grade one where the children were learning to write, spell, and sound out words. Table 11 displays the correlations between the children's scores on the tasks and their level of schooling. The higher in the schooling range the focal child was (preschool, kindergarten, or first grade), the higher was his/her score along these dimensions.

Table 11

Correlations Between Task Scores and Child's Education Level (N=24)

Task	r	p.
Alphabetic Principle	.62	.001
Written Register	.41	.07
Concepts About Print	.61	.002
Concepts of Writing	.70	.0003

Clearly, the concept that print makes sense linguistically (Intentionality) was well learned by most children before they began school and therefore does not show a relationship to schooling.

Correlations Between Task Scores and Frequency of Literacy Events

The knowledge that print maps onto speech at the phoneme/grapheme level (Alphabetic Principle) was significantly correlated with overall frequency of literacy events when the analysis includes the Hart family. When the Hart data is withheld, this relationship disappears. Table 12 displays these findings; note that the Hart child is in kindergarten. This was true both for all types of events coded and for only reading and writing events.

Table 12

Correlations Between Task Scores and Literacy Event Frequency with Schooling (N=24)

	Literacy Event			
	Total		Rdg/Wrtg	
Task	r	p≤	r	p≤
All				
Alphabetic Principle	.45	.02*	.47	.02*
Pre & K				
Alphabetic Principle	.48	.02*	.56	.01*

*No Correlation when Hart data withheld

Correlation Between Task Scores and Mother's Literacy Level

Because we had so few low literate families in the study, it was hard to find any statistical relationship between the literacy level of the mothers and the children's knowledge about written language. However, a moderate relationship did emerge between the concept of Intentionality and mother's literacy level ($r = .37$, $p < .07$, $N = 24$).

Correlations Between Task Scores and Text Levels

We hypothesized that frequency of literacy events using different levels of text would impact acquisition of written language concepts differentially. Table 12 indicates this to be the case in several instances. Because of the relationship between schooling and task scores, we also analyzed these relationships according to school level. Table 13 also includes this information.

Table 13

Correlations Between Task Scores and Frequency of Different Text Levels in Home Literacy Events (N=24)

	Text Level							
	Letter		Word		Disc.3		Disc.4	
Task	r	p≤	r	p≤	r	p≤	r	p≤
All								
Alphabetic Principle			.48	.03*	.55	.01*		
Concepts of Writing							.46	.05
Preschool & Kindergarten Only								
Alphabetic Principle	.37	.09	.62	.002	.63	.002		
Concepts About Print (Raw Score)	.45	.03						
w/o Hart	.47	.03						
Concepts About Print (Stanine) w/o Hart	.41	.06						
Preschool Only**								
Concepts About Print (Raw Score)							.61	.10
Concepts About Print (Stanine)							.67	.07
Concepts of Writing			.90	.01			.88	.02

*Correlation disappears when Hart family removed.
**With such a small n, the correlation must be very high to achieve statistical significance.

We conducted another analysis with text levels by combining the discourse levels 3 (children's books) and 4 (adult reading material, e.g. novels, newspapers, magazines, etc.). The rationale for this move included our judgement that along many of the criterial dimensions for assigning text to the different levels,

discourse levels 3 and 4 were the same. These included complexity of syntax in many cases and literary quality of vocabulary. Secondly, phenomenologically, these two levels were closer to each other than to levels 1 (personal messages) and 2 (comics books). In addition, there were only a few instances of comic book reading in the data, thus the frequencies for the discourse levels fell more bimodally between Level 1 and Levels 3 and 4. Using these admittedly impressionistic judgements, we ran an analysis of relationships between text levels and task scores, combining levels 3 and 4 as "higher" and "more written" than Level 1.

We also computed the proportion of text levels use within each family and looked for relationships to task scores. In other words, we asked if higher level of text use proportionately to other levels would be related to children's acquisition of print knowledge. With these analyses, we saw that understanding of the alphabetic principle was related in ways and with groups of children not revealed in the simple frequency analysis which separated discourse levels 3 and 4. Table 14 displays these results.

Table 14

Correlations Between Task Scores and Frequency and Proportionate Use of Combination Text Levels 3 and 4 (N=24)

	Levels 3 & 4		Proportionate 3&4	
Task	r	p≤	r	p≤
All				
Alphabetic Principle	.55	.01	.40	.05
w/o Hart			.35	.10
Preschool & Kindergarten Only				
Alphabetic Principle	.58	.004		
Preschool Only				
Alphabetic Principle			.78	.02

Correlations of Task Scores With Social Domains Mediated By Literacy

To answer our questions regarding a possible relationship between childrens acquisition of written language knowledge along the different dimensions measured and different types of social/ functional uses of print in their homes, we ran simple correlational analyses. As Tables 15 and 16 show, knowledge of both the Alphabetic Principle and Concepts About Print is related to certain purposes for which people in their homes use print along social domains.

Table 15

Correlations Between Task Scores and Different Social Uses of Print in the Home (All Literacy Events) (N=24)

	Task					
	Alph. Princ.		Conc./Print Raw Score		Conc./Print Stanine	
Domain	r	p≤	r	p≤	r	p≤
All						
Entertainment	.60	.002*				
Learning Abt. Literacy	.46	.02				
Storybook Time	.51	.01*				
Participating Info. Ntwrk			.46	.03	.47	.02

*This correlation disappears when Hart family removed from analysis.

Table 16

Correlations Between Task Scores and Different Social Uses of Print in the Home (Reading and Writing Events Only)

	Task									
	AP		CAP(rs)		CAP(st)		COWr		WR	
Domain	r	p≤	r	p≤	r	p≤	r	p≤	r	p≤
All										
Entertainment	.60	.002	.35	.09	.45	.03				
w/o Hart			.47	.02						
Learning Abt. Literacy	.50	.01								
w/o Hart			.64	.001	.62	.002				
Pre & K Only										
Entertainment	.63	.002*								
Learning Abt. Literacy	.60	.003*	.60	.004*	.57	.01				
Religion	.53	.01*								
Storybook Time	.59	.003*								
Preschool Only										
Entertainment			.77	.03	.72	.04	.88	.02		
Suggestive Pre Only**										
Entertainment									.43	ns
Storybook Time									.51	ns

*Correlation disappears when Hart family removed from analysis.
**With such a low n in the preschool group, an extremely high correlation is needed for statistical significance. However, these

correlations are considered moderate/strong in descriptive statistics and they are theoretically interesting (see Discussion section).

Participation in Adult Literacy Programs and Home Literacy

In an attempt to begin to measure impact of adult literacy programs on functional literacy use in the home, we computed simple means of literacy event frequencies. We also computed the mean number of literacy events which involved mother and focal child interaction. This last computation was done because of the literature which attributes learning by young children in the home, particularly language learning, to interaction between the mother, or caregiver, and the child. Family literacy programs place a high priority on activities which involve both parents and children around literacy learning. Some of parents in the study were involved in family literacy programs rather than the traditional adult basic ed model. Table 17 shows the differences in literacy event frequencies and mother/focal child interactions between those parents involved in family literacy programs, adult basic ed programs, and no programs.

Table 17

Average Literacy Events and Mother/Focal Child Interaction Per Hour Observed by Families According to Their Participation in Family Literacy or Adult Basic Ed Programs (N=24)

		Lit. Events		M-FC Interact.	
Program	n	$\bar{X}$	SD	$\bar{X}$	SD
Family Literacy	7	1.05	.38	.41	.32
Adult Basic Ed	4	.97	.58	.20	.16
None	9	1.38	1.43	.86	2.06
w/o Hart	8	.86	.56	.14	.13

Excluding the effect of the Hart family, it is clear that those mothers involved in some kind of adult literacy program use print more in their homes than those who are not. Additionally, for those mothers involved in adult literacy programs, mother/focal child interactions around print are twice as frequent as for those mothers involved in the more traditional adult basic ed programs and almost three times as frequent as for those mothers not

involved in any adult literacy program.

The outlier status of the Hart family is especially stark in this comparison. This is due to the fact that of the many literacy events occurring per hour observed in this home, many of these were very child-centered events such as helping with homework, reading to the focal child, and parent-devised activities designed to facilitate the learning to read/ write stage of literacy development. Ms. Hart was a single parent who worked full time. When she and her child were home together in the evenings, almost all of her time was spent with him until he went to bed, much of it devoted to child-centered literacy activities. This was a highly unusual pattern of behavior among the participants in this study.

Mother/Focal Child Interaction and Written Language Knowledge

The frequency of mother/focal child interactions arount print was significantly related to emergent literacy knowledge. Specifically, children whose mothers interacted with them more around print knew more about the alphabetic principle and concepts about print. Again, the Hart family heavily weighted these results since the majority of the observed literacy events involved interaction between Ms. Hart and her child. Table 18 displays these results.

Table 18

Correlations Between Degree of Mother/Focal Child Interaction and Task Scores

	M/FC Interaction			
	With Hart (n=24)		w/o Hart (n=23)	
Task	r	p≤	r	p≤
Alphabetic Principle	.50	.01		
Concepts About Print (Raw Score)			.54	.01
Concepts About Print (Stanine)			.55	.01

Summary of Results

The preceeding results of the many analyses run can thus be summarized:

*Literacy events in these low-SES homes ranged from a high of 5.07 (total)/ 4.21 (reading and writing only) to a low of .17 (total)/ .04 (reading and writing only), per hour observed.

*The average frequency of total literacy events was 1.16 (SD=1.05) per hour and .95 (SD=.51) per hour without the Hart family.

*The average frequency of reading and/or writing events per hour in the homes was .76 (SD=.88) and .58 (SD=.34) without the Hart family.

*Low literate homes had less than half as many total literacy events as literate homes. There were more than six times as many actual reading and writing events in the literate homes as in the low literate ones.

*The people in this study used print mainly as part of their entertainment activities and for their daily living routines. They used print in the home least of all for work-related activities. These finding are similar to Teale's (1986). However, storybook reading was markedly more frequent in our homes than in Teale's.

*Proportionately within individual homes, Teale (1986) found more literacy events mediating the social domains of Information Network, Literacy for the Sake of Teaching/Learning Literacy, and Work, while people in our sample devoted proportionately more literacy events to Storybook Time and Interpersonal Communication.

*Within these homes, most of the written language being read or written was at the clausal/ phrasal level of complexity -- or simplicity. The next most frequently used text level was the most complex and written, Discourse 4, i.e. newspapers, books, magazines, documents, and so on.

*Low literate families read and wrote at text levels different from literate families mainly at the higher discourse levels and at the Word level (which usually reflects some type of learning activity).

*The focal children, across the families, (a) had a near complete understanding that print is linguistically meaningful; (b) some understanding that print maps onto speech at the phoneme level; (c) a simple grasp of the specialized syntax, vocabulary, and decontextualized nature of written narrative; (d) a below-average knowledge of print conventions, concepts, and vocabulary,

and (e) a less-than-complete understanding of writing as a symbolic system.

*The different domains of written language knowledge measured in this study are related to each other (i.e. they are not independent domains) with the exception of Written Register.

*Years of formal literacy education was related to all of the written language dimensions measured with the exception of Intentionality (which was virtually known by all).

*As frequency of literacy events increased in the homes, so did the likelihood that the focal child would know more about the alphabetic principle. This relationship disappears, however, when the Hart family data is withheld.

*Children in homes with low-literate mothers were less likely to understand the concept that print is linguistically meaningful.

*Children whose parents focus on print at the letter and word level and the discourse level of children's books know more about the alphabetic principle and concepts about print, with an effect for schooling.

*Children's understanding of writing as a system is related to the frequency with which their parents read or write at a higher discourse level. This is especially true for preschoolers.

*Children whose parents read and write <u>proportionately</u> more at the higher discourse levels know more about the alphabetic principle.

*Children whose parents included literacy events more (a) as part of their entertainment activities, (b) to learn/teach about literacy, (c) for storybook time, and (d) to participate in information networks knew more about the alphabetic principle, concepts about print, and, for preschoolers, concepts of writing as a system.

*There is some evidence that preschoolers learn about written register when their parents use print for entertainment (including their own reading) and to read children's books to them.

*Parents who take part in adult literacy programs employ print to a higher degree in their homes and interact with their young children more around print than do those parents who are not involved in such programs. Parents in <u>family literacy</u> programs use print more in their homes and interact with their young children more around print than parents in the more traditional adult basic education programs.

*In those homes with more mother/focal child interactions, the

children knew more about the alphabetic principle and concepts about print than those in homes with fewer interactions between the mother and her child.

Discussion

This study is to be categorized as basic research. With the results we have added to our knowledge base about precursors of successful literacy learning.

With a study such as this, with data based upon both naturalistic observations and experimental measurements, the many disparate results need to be pulled together into a comprehensive picture before they can be informative. I will attempt to do this with this section. Before I launch this effort, however, I believe that it is necessary to spell out exactly what we have and what we do not have with this study. I will begin with what we do not have.

The main drawback of this study is the lack of a truly representative sample of the low-SES population. The only way to achieve this would be to draw a truly random sample of participants from the entire population, whether in the immediate geographical area or beyond. As part of this, the sample should be larger to improve our ability to generalize our results. The results of this sampling problem (nonrandom, relatively small) include the following. First, the results are skewed toward a brighter picture than perhaps would exist, given a representative sample. These families were all interested in their children's learning, were comfortable enough with themselves as people and as parents to allow us into their homes, and many were self-motivated enough to enroll in literacy programs for themselves. Secondly, the numbers were not enough to provide reliable results re the differences between low or nonliterate families and literate ones. As mentioned before, this was primarily a problem of identification and access. The final troubling result of the sampling problem was a lack of real distribution of the data, both within the task score data set and the observational data set. This made correlational analysis problematic. Without a good distribution of data points, correlations cannot be found where they may very well exist, given the distribution. I believe that a larger sample would have settled the question of whether correlations do exist between factors, where they did not show up in this analysis, or they truly do not.

Given the above drawbacks, though, what we do have with this study is more information about the relationships between young children's emergent literacy conceptualizations and the specific activities and interactions which occur within their homes than we have ever had before. Never before have this many young children and their families been observed so closely over this length of

time and tested for knowledge deemed important for learning to read and write. This information has been gathered in as ecologically valid a manner as is possible, strengthening the validity of the findings. We have confirmed some common beliefs with empirical data, and disconfirmed others. We have revealed some promising implications for instruction and raised new research questions. It is important to keep both the above-stated limitations and strengths of this study in mind as we try to make sense of the findings.

Frequency

The overall finding of less than one literacy event per hour within these homes (with the exception of the Hart family re Total Literacy Events) suggests a generally low level of involvement with print. Further, with the elimination of the Hart family, we see just over one-half of an actual occurrence of reading and/or writing per hour. This means that two hours would need to pass before a member of the family engaged in either a reading or a writing activity, while in the family context. While we have no numerical data from a comparison group of middle-class participants, interpretation of anecdotal as well as ethnographic accounts of middle-class family literacy (Bissex, 1980; Taylor, 1982; Wolf & Heath; 1992) suggests that one would find a higher frequency of literacy events. This comparison certainly fits the impression of the field researchers for this study who commented, except for the Hart family (!) that there were generally few occasions for them to note down literacy events. In fact, we saw disconcertedly too many field notes filed with the simple notation, "No Literacy Events Occurred".

While we did see variation, we did not see as much as Teale (1986) reports, with only one family in our study accounting for most of the literacy events and many of the effects on children's scores. Considering both the lack of random sampling and the hypothesized positive skew of the data, I believe that this impression of low engagement level with print likely represents the high end of the average of the population. In this way, I see the Hart family representing the extreme high end of a normal distribution and the missing low/ nonliterate and many of the (potentially) unwilling participants as representing the low end of the distribution. However, this is purely speculation at this time.

Comparison to Teale Study

By comparing those results possible with Teale's (1986), we have expanded and solidified our knowledge base about literacy in low-income homes. We have also, in the process, increased the validity of our findings. I believe this comparison across studies is extremely important in educational and social science research where real reliability and validity are so hard to ensure and so

much rests on research outcomes. Teale and I studied populations at opposite ends of the country and still arrived at comparable conclusions. His study used roughly the same procedures as did this one for data collection and we included his social domain analysis in our repertoire of analyses. We found basically the same frequency of reading/writing occurrence within each domain, with a few exceptions. The biggest difference, and most interesting for our research question and interest, is in the frequency of storybook reading. We found appreciably more instances of this activity in our homes than he did in his homes. Given the general feeling that reading to young children is just about the best thing parents can do to prepare them for learning to read, our finding is encouraging and suggestive for further study. It is encouraging in that it suggests that increased governmental, media, and programmatic focus on fostering this activity is beginning to pay off. It is suggestive of further study both to confirm our findings and to look into the possibility that the difference between the studies is related to the fact that many of our parents were enrolled in adult programs which encourage reading to young children (and not to a generalized increase in the activity).

Uses of Print in the Home and Children's Emergent Literacy

The question of interest to this study was "In what ways do the literacy levels of parents affect the ability of their children to learn to read and write in school." Bringing an emergent literacy perspective and research history to this question, I operationalized "ability ...to learn to read and write" to mean possession of critical knowledges about written language at the time of beginning literacy instruction. I also hypothesized that low and nonliterate parents would employ literacy to a lesser degree than would functionally literate parents and their literacy events would differ qualitatively as well. Thus, to a degree, I operationalized "literacy levels of parents" to mean frequency and type of literacy events. Given this, the research focus of this study was to describe the ways in which the frequency and types of literacy events in the home influenced the knowledges which the young children in the homes were acquiring about written language.

As stated above, looking only at frequencies of literacy events within this sample gives us only a little information of interest regarding this question. It is only with the Hart family in the data pool that we get any sort of correlational relationship between written language knowledge and frequency of literacy events. However, given my speculative scenario about where the Hart family would fit into a representative sampling of this population, this is suggestive of an influence on emergent literacy knowledge of mere frequency.

It appears from the data, though, that we can see more by looking beyond general frequency to qualitative aspects of the

literacy events that do occur for relationships to children's emergent literacy knowledge. I will first discuss how the children look, in general, in terms of their emergent literacy knowledge and elaborate some on the ways in which the different domains influence the learning to read and write process.

Children's Knowledges of Written Language.

The written language knowledge domains measured in this study all tap different, but for the most part related, aspects of print as a semiotic system. The domains of Alphabetic Principle, Concepts About Print and Concepts of Writing contain information about the physical manifestations of this system, how meaning is presented physically to the communicant, and thus, how that meaning is to retrieved via symbols.

When one "gets" the alphabetic principle, he/she understands that when encoding and decoding the words of English (making it written), the code is at the phoneme/ grapheme level. That is, letters generally stand for isolable phonemes (speech sounds). Whether one can accurately do this (conventionally map the right letter to the sound) is beside the point. Understanding the alphabetic principle is knowing that one should do this in order to read and write English. A plethora of data exists (Adams, 1990) affirming the crucial need for this understanding for learning to read and write.

However, one is not born knowing about the alphabetic principle. One can acquire one's oral language to a high degree of fluency and never understand that, for English, the written system is based on a grapheme/ phoneme match. Studies show, actually, that the perception of the phoneme is not "natural" (Gleitman & Rozin, 1977); rather the smallest, easily achieved, perceptual unit (a unit which can be "recognized" or "heard" as a unit) is the syllable. In fact, several written systems in the world use syllabaries; they represent syllables, not phonemes, with individual written symbols.

Several influential studies have shown that children come to a complete grasp of the alphabetic principle in the process of learning to read and write (Adams, 1990; Ehri & Wilce, 1980 & 1985) when it is either pointed out to them as part of instruction or they deduce it from exposure to written words in school. However, the hypothesis is that many young children begin school with the beginnings of this understanding, and some having achieved it totally. Read's landmark study (1971) demonstrated that some three- and four-year olds from professional families can perceive individual phonemes and encode them in a nonconventional, but systematic, way as they "invent spell." Having received no formal spelling, or reading instruction, these children, it is hypothesized, must have achieved this alphabetical principle knowledge by deducing it from their environment filled with many

instances of print and their active involvement in encoding and decoding it. The ability, or, more specifically, the opportunity for the young children in the present study to do the same was part of the research question.

The other two domains involving the physical manifestations of the ways in which print encodes meaning, Concepts About Print, and Concepts of Writing, are closely related to the alphabetic principle in that they included the conventions for encoding written English, thus for decoding. So when one knows the concepts of print and the concepts of writing as a system, one knows that marks called letters make up words, and words make up sentences which are marked by periods, question marks, and exclamation marks. One knows that these marks are written, and read, beginning at the top left corner of the block of print and across horizontally to the top right corner, at which point one returns to the left end of the line underneath the one just finished, and so on. One knows that letters are different from numbers, and pictures, and that their shapes, orientations, and identities are stable across time and across contexts. Again, research has shown and hypotheses posed that, while much of this knowledge is learned in the process of learning to read and write in school, many children have learned it "naturally" in the home context before beginning formal instruction. These children begin school with a clear advantage over those children who do not know these concepts.

The interrelatedness of these three domains of written language knowledge is clear from our findings on the task score intercorrelations and can also be seen in the other correlational data as the three domains which most often appear together as related to certain uses of print in the home.

The domain of Intentionality includes the conceptual understanding, underlying the above three domains, that print is a semiotic system, signifying meaning linguistically. Children who know this, know that print "says something." They do not have to know what it says; they only have to know that it says something. Thus, when a young child tugs on her mother's sleeve, points to a sign over the door in the store and asks, "What does that say?", you may conclude that this child knows that print is a linguistically meaningful system.

Again, this is not knowledge children are born with. Without experiencing people in their lives "reading" and "writing" this semiotic system, using it, taking and giving meaning with it, they would not suspect that those particular marks signify. Without this understanding, instruction in reading and writing this system would be meaningless, non - sense, to children. Learners must bring this concept to the tasks of learning that (1) language, for English, maps onto printed symbols at the phoneme/ grapheme level, and (2) the different concepts of print/ writing. It would not be possible, for example, for children to understand that the mark (⊥)

comma signaled an oral intonation when speaking if they did not know that print and its conventions encoded language.

Finally, the domain of Written Register was measured by us. Evidence from this study and others (Purcell-Gates, 1989; Purcell-Gates & Dahl, 1991) suggests that knowledge of this domain is more or less independent of the preceding ones. Knowledge of written storybook register is knowledge of vocabulary and syntax, of linguistic ways to maintain meaning within text without reference to the physical world via gesture, intonation, or shared background knowledge. It is possible to possess this knowledge -- how the text of a storybook "sounds" -- without any understanding of the alphabetic principle or concepts about print and writing as a system. It is written language knowledge, though, in the sense that it is a register specific to a genre of written language.

Research findings (Leu, 1981) lend some weight to the strongly-held hypothesis that this linguistic knowledge of written register facilitates the development of learners as readers and writers. However, this knowledge of syntax, vocabulary, and within-text reference conventions may not really affect literacy development until the learners are past the beginning-to-read stage. Beginning literacy instruction focuses on gaining control of the encoding and decoding aspects of print -- those very domains of knowledge measured by the Alphabetic Principle, Concepts About Print, and Concepts of Writing tasks. Once learners have mastered these skills, they then develop mainly through extensive reading/ comprehension of written language (Chall, 1983). It is at this point that children with superior knowledge of written-language - specific vocabulary, syntax, and reference conventions can use this knowledge to more easily comprehend and learn from written text. It is also at this point that those children without this knowledge will flounder seriously and fall further behind.

Again, this is knowledge which is acquired through experience, in this case with written stories. The only possible way in which young children can acquire this implicit knowledge is through hearing stories read to them. Purcell-Gates (1988) confirmed that children, from all economic/ social levels, who were extensively read to during their preschool years did possess a describable written narrative register. Later studies strengthened the inference that the knowledge came from being read to by measuring this knowledge in randomly selected low-SES children (who, it was assumed were not so extensively read to). Findings revealed significantly lower scores on the measure (Purcell-Gates & Dahl, 1991; Dahl & Freppon, in press).

Given the above, how did the children in this study look across these crucial domains of written language knowledge? Overall, with one critical exception, they looked remarkably similar to the two samples of randomly selected low-SES kindergarten children in the Purcell-Gates and Dahl (1991) study

and the Dahl and Freppon (in press) study. This is reassuring when considering the reliability and validity of our findings regarding written language knowledge of the children. All three groups of children's overall knowledge of written language can be described as below average but present to a degree. In other words, they do know some things about the domains measured; they just do not know as much -- based on some standardized data and on strong inference -- as their middle-class peers.

The exception to the above comparison with previous studies is the knowledge revealed within the Intentionality domain. The children in this study scored appreciably higher than did the children in the other studies. Table 19 displays the means and standard deviations of the scores on the five tasks for both the Purcell-Gates and Dahl (1991) study and the present one. Note the big difference on the Intentionality task.

Table 19

Means and Standard Deviations of the Scores on the Written Language Knowledge Tasks For Purcell-Gates & Dahl Study and Present Study

	Study			
	Purcell-Gates & Dahl		Present	
Task	$\bar{X}$	SD	$\bar{X}$	SD
Intentionality	2.91	1.58	4.35	.76
w/o Naturally Occurring Data			2.60	1.76
Written Register	23.64	17.33	24.53	14.52
Alphabetic Principle	1.28	.44	1.45	.68
Concepts About Print (Raw Score)	6.67	3.58	8.13	4.19
Concepts About Print (Stanine)	3.13	1.39	3.58	1.50
Concepts of Writing	3.66	1.72	4.17	1.19

As can be seen in Table 18, the children in this study would have looked similar to those in the earlier study without the inclusion of naturally occurring data into the analysis of this possession of written language concepts. The earlier studies were all conducted within school settings, thus precluding the opportunity to observe children in their homes and communities, engaging in self-directed, naturally occurring actitivities. Thus, our conclusions on the existence of key written language concepts was limited, in the earlier study, by individual children's ways of interpreting and responding to our experimental probe. This difference had a big effect on our findings within the Intentionality domain, but for those domains for which we could use naturally occurring data (Alphabetic Principle and Concepts of Writing), we also see a slight increase in scores for this study. (Of course, it is also possible that the slight increase in all but the Intentionality domain can be attributed to the fact that this was a volunteer sample, not a randomly-selected one, and/or to the increased comfort felt by the children in their homes as compared to their classrooms.)

This is an important methodological point. We must remember that experimentally gathered data which results in inferential conclusions about mental states should always be taken with a grain of salt. At best, it must be assumed to result in <u>conservative</u> estimates of knowledge/ ability. This is expecially true for research with young children who have less experience interpreting experimental requests and smaller repertoires for responding to them.

Thus, we found that most of our children had deduced the semiotic nature of written language, the <u>Intentionality</u> of print. One can interpret this to imply that by virtue of the literacy activities which did permeate their lives, they had figured out that print "says" something.

The conclusion from an earlier case study of a nonliterate home -- that the children in this home did not totally grasp the intentionality of print because they saw no one using it -- was supported by our finding of a mild correlation between low literate homes and scores on the intentionality task. The children whose parents were judged to be low literate did not grasp this concept as well as did those whose parents were functionally literate. Put together with the differential frequency of literacy events between low and functionally literate homes, I think we can surmise (bearing in mind the low numbers of low literate homes) that children whose parents have trouble reading and writing, do not read and write as much, thus depriving them of the opportunity to deduce the intentionality of written language, the critical base concept needed to learn to read and write. As the previous case study shows so graphically, the absence of this concept plays total havoc with the children's ability to learn from, to make sense of,

formal beginning literacy instruction.

Contrary to acquisition of knowledge that print "says" something through deduction from observing others use it, learning of the alphabetic principle (in the home) appears to rely heavily on child-centered literacy activities like storybook reading and intentional teaching with focus at the letter and word level. It makes sense that this very abstract concept would not be learned without full focus on letters and words in print and an effort to desconstruct them in order to read and write. Adult-centered activities usually do not engender such focus and attentional energy on the part of children. Activities such as checking the newspaper for sales or reading street signs while driving do not allow time nor motivation for children who happen to be present to see the printed symbols in the way needed to acquire this concept.

A child-centered literacy activity like storybook reading does engage the learner fully with the never-changing words (over repeated readings) always in front of him/her. There is the opportunity to ask about the identity of words, note letter-sound patterns, and begin to construct an understanding of the phoneme/ grapheme relationship in written English. The same dynamic holds during parent-child teaching/ learning sessions, where the purpose of the activity is to teach/ learn about how print maps onto speech. These activities more frequently focus on language at the letter and word levels, e.g. "How do you spell....?" or "What does that say?" It was clear from our data that those parents who took the time to read to their children and help them learn about words had the biggest payoff in terms of their children's knowledge about the alphabetic principle, a most crucial concept for learning to read and write.

Although related to alphabetic principle and often learned about the same time through the same activities, Concepts About Print and Concepts of Writing are not quite so abstract and thus it is possible to learn about many of them earlier in development. This was apparent in our data which showed a strong relationship in the preschool group alone with several of the home literacy dimensions. Across all of the children, knowledge in these domains was clearly associated with the same child-centered literacy activities of storybook reading and the teaching/ learning activities which focused at the letter and word levels. Looking at the preschoolers alone, though, we pick up the effect of parent's own reading and writing on the children's acquisition of these concepts. Children whose parents used literacy for their own purposes such as to participate in information networks and for entertainment and who read and wrote at the more complex discourse levels for these purposes "picked up" some of these concepts in the more natural way suggested by many emergent literacy researchers.

Thus, we see young children -- whose homes (1) contain books, magazines, and newspapers and parents who read them and talk about

them and (2) have parents who also read to them and help them read and spell on their own --learning such concepts as print, not pictures, is read, directionality, concept of word and letter, and so on. Conversely, those children -- with fewer instances of adult reading and writing and whose parents do not read to them or help them figure out words and spell -- do not begin formal literacy instruction knowing as much about these crucial concepts.

We found no statistically significant relationships between knowledge of written register and literacy in the home. However, the suggestion of the obvious link to being read to is present in the analysis of the preschool-only group. Meta-analysis of several previous studies (Purcell-Gates, McIntyre, & Freppon, in preparation) has shown that exposure to written stories in kindergarten and first grade allows low-SES children to attain the same level of written narrative register as well-read-to children, albeit later. In light of this, I interpret our findings to indicate that the negative effects of not being read to (lack of knowledge of written register) was ameliorated enough by schooling for our kindergartners and first graders that the effect of the variation which did exist in the homes with storybook reading was negated.

It is important to keep the scores of these children in perspective. When compared to the sample of well-read-to children (Purcell-Gates, 1988), these children exhibit much lower levels of knowledge of written vocabulary, written syntax, and within-text referencing. The average score on this measure for the well-read-to children was 42.03 as compared to this sample's mean of 24.53 (with comparable standard deviations). The highest score among the well-read-to children was 140 as compared to a high score of 64 for this sample. Even considering the time lag for this advantage to take effect (beyond the beginning-to-read stage), the well-read-to children have many more years and opportunities from which to build rich repetoires of literary vocabulary and written "ways of saying". It is no wonder that the achievement gap between those who have and those who do not widens exponentially as the school years progress.

In summary, the results of this study support the notion that parents who both read and write on their own at more complex levels of text and who read and write with their children provide their children with the appropriate experiences from which to build important written language concepts, concepts which will give them clear advantages in learning to read and write in school over their less fortunate peers. Parents with lower levels of literacy do less of the above and thus are unable to help their children acquire the concepts in the home which will be needed to make sense of instruction in school.

Schooling

One clear piece of good news to emerge from this study is that education -- schooling -- helps these children tremendously. All of the concepts measured, excepting Intentionality, were affected by schooling. The more exposure to formal literacy education these children experienced, the more they knew about the crucial concepts.

While this may seem like a common-sense notion, it is important to note and remember as we look more and more to the home as the context for important learning. We must not fall into the trap of despair when we look at the disparity between the opportunities which exist for literacy learning in the homes of literate and/or middle-class homes as compared to those in low literate and/or low-SES homes. Children's futures are not predestined so completely as to be totally affected by their home environments. Children are all learners and they learn what they are taught, whether it be in the home or in school. The key is to know what it is that children do know and do not know; then to teach what they do not know in such a way that they can make sense of it and find a use for the skill.

Adult Programs

That said regarding the potential of schooling for children, it is also clear from this study that literacy programs for adults do affect home activities. The parents who were attending adult basic ed programs to improve their own skills were clearly reading and writing to a greater extent in the homes and were involved in more of the beneficial interactions around literacy with their children than those parents uninvolved in adult educational programs. Those parents who were attending family literacy programs had even higher frequencies of literacy events and double the amount of parent/child interactions around print as those in the adult ed programs. Family literacy programs are built on the premise that the home is a crucial learning environment for children, and our findings strongly affirm that these programs are achieving what they set out to achieve -- literacy learning at the family level, thus increasing the children's chances for success in school.

Implications for Research and Instruction

Research. Running throughout this discussion is the implied comparison of the data from the low-SES homes in this study to the activities and skill levels within middle-class homes. This is important because the very rationale for studying home literacy is to try to uncover operational factors involved in the disparity of achievement levels between low-SES children and those from middle-class communities. However, it should be clear by now that there is precious little empirical data from middle-class homes with

which to compare. We have used measures and data collection procedures for this study which have been developed specifically for emergent literacy study. None of these have been used with middle-class populations, with the exception of Clay's Concepts About Print (1979) measure which was standardized across populations. This is mainly because other standardized measures for early literacy knowledge do not fit the emergent literacy paradigm but were designed for the "readiness" paradigm.

However, we have now reached the point where we must begin to do cross-cultural studies if we wish to remain scientific about our investigations. Not until we have actual scores and frequencies for factors of interest from middle-class homes can we come to informed conclusions regarding the disparity in literacy achievement between low- and middle-SES children. With the same data from both low-SES and middle-class homes, we will have a more realistic picture of what the differences actually are between the two groups of children at the start of formal instruction, how schooling interacts differentially with their entering knowledges on their achievement, and implications for specific ways in which education for both children and adults can best help overcome the historic lag in achievement between the two groups.

Instruction. The results of this study strongly suggest the need for early literacy instruction which allows for teacher/ child interactions around print in the context of child-centered activities. We have confirmation that not all children begin formal instruction at the same conceptual level regarding written language. We have seen how exposure to functional reading and writing and focused attention on the symbolic system of print allow the children the opportunity to build these concepts. If we believe that equal opportunity should exist for all children, then we must make sure that we design instruction which allows all children to construct the necessary conceptual information to successfully, and equally, learn to read and write. Classrooms with much exposure to orally-read stories, functional reading and writing and direct, explicit instruction at the letter and word level on the ways in which print maps onto speech would match the ingredients found in the higher achieving homes in this study.

Implications for adult education are also clear from the conclusions of this study. Programs which focus on family interactions around, and uses of, print are called for. Parents should be encouraged to increase their reading and writing of texts at the more complex levels for their own functional reasons within the home. Instruction should not focus only on passing tests for the GED but should help participants find the many ways for which they can use written text in their lives. They should help participants learn how to read to their children and set aside time each day to work with them around reading and writing. Parents should be encouraged to provide paper and pencils, crayons and markers for their children to use when they so desire. They should

be encouraged to answer children's questions about print and to expose them to as much functional written language as possible.

Children and adults are all learners. They can all learn and they will learn if given the opportunity and the appropriate contexts within which to learn. It is my hope that this study helped to contribute to what we know about opportunities and appropriate contexts for literacy learning.

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APPENDICES

APPENDIX A

Data Narrative
Family: Anderson

Nadine is from Haiti, but attended and completed high school in Boston. She told me that she also attended and completed secretarial school. She works as a nurse tech (i.e., nurse's aid?) at a nursing home. She has two children: Akil, a 10 year old male who is going into the 4th grade in public school and Tiesha who will be attending pre-kindergarten in the fall. (Tiesha will attend pre-kindergarten because her birthday falls outside of school guidelines for attending kindergarten in the 1993-94 school year.) Both children were born in Boston. Nadine says that she has never had reading, writing or other problems in school; ditto for Akil.

Nadine lives in a 2 bedroom apartment in a Brookline housing project and has recently qualified for food stamps.

During my observations, Nadine spoke English in the home except on one occasion. The children's first language is English and I never heard them speak Haitian.

Nadine said she does not read to Tiesha even though she feels she ought to do so. During my observations I never saw her read to Tiesha, nor did I see her encourage Tiesha to read.

I have seen Akil reading comics and instructions for a computer game and he has many (about 35) books written published by "Scholastic". I have seen Nadine read coupons and look at mail and I've seen her write once. I've never seen Akil write.

Written matrerials around the apartment:

1. Akil's Scholastic books and comic books
2. A Sunday Boston Globe
3. Coupons and grocery flyers
4. Avon catalog
5. Slips of paper with telephone numbers, letters and notices (school and notices from the apartment complex administration office) attached to the refrigerator door.
6. A brochure outlining the reading list for Brookline Public Schools for grades K-8
7. Two Family Circle magazines
8. A drawing of a flower made by Akil with his name on it taped to the inside front door.

There is no writing on the walls, such as the alphabet, posters, etc. in the children's room. And, I did not observe any adult reading material, such as novels in the apartment. Nadine seems to use print functionally rather than for pleasure.

Data Narrative
Family: Ambruster

The participants in the Ambruster family observations include Kathy, mother, age 27; Joe, father, age 27; and their children, Nicole, age 7, and Melissa, age 3. During my observations, the Ambruster family also had a friend staying with them for part of the time, and they had numerous visits from Kathy's relatives, Joe's friends, and other children in their apartment building.

At the time of my observations, Kathy was attending Bunker Hill Community College two nights a week. She also was a part of Julie's Family Learning Program, and sporadically attended the "education class" that they provide one morning a week. She said that "she loves to learn" and that her mother calls her a "professional student." Kathy often spoke of how "proud" she was of Nicole's school work, and often had Nicole's spelling tests posted up on her refrigerator. She once told me that she tries to "give Nicole extra attention with her spelling work" because she herself "had a lot of trouble with spelling" when she was in school. I occasionally observed Kathy to be reading a magazine or material related to AFDC or Nicole's school; occasionally she also helped Nicole decode the words in a book that Nicole was trying to read independently; once I observed Kathy read a book aloud to Melissa. Other than that, she was most often engaged in conversation with adults or watching TV. There was reason to believe, however, that she did read magazines, the newspaper, and school related text when the children were asleep or at their grandmother's.

Joe dropped out of high school in the 10th grade. During my initial visits, he frequently would be alone in his bedroom reading a book. After several visits, I frequently observed him sitting in front of the TV with the newspaper in his lap. He would alternate between reading the newspaper and watching the TV. Once I also observed him to read some forms related to a medical injury he was sustaining and information re food preparation when he was making dinner. Kathy told me once that "Joe loves to read." Joe engaged minimally with he children, except when Kathy was not in the home. Once, however, I observed Melissa "pretend reading" on the couch next to him and him pretending to be paying attention to her.

Their houseguest and one of Melissa's godmothers both were involved in literacy events on one occasion each --- Michael read a greeting card and the godmother read a story to Melissa. Other than that, guests and relatives were not involved in literacy events.

Nicole turned 7 in December and was in the first grade during my observation period. Previously, she had gone to 4 years of schooling at the Montessori school over a JFLP. Nicole appeared to love to read --- I frequently observed her to be reading a book aloud, often asking for and trying to receive some adult attention. She did not often receive the attention from Kathy or Joe that she

wanted, and she responded by continuing to read aloud to herself and occasionally to Melissa.

Nicole also did some writing (of words) on her own, both as part of play with her friends and as part of personal injoyment. There was a bookshelf full of children's books (approximately 100 or 140) in the apartment, and Nicole told me that Kathcy had "read all of the books" to her, and "some twice."

Melissa occasionally asked for a book to be read to her, and a few times Kathy or a relative did. I also obsrved Melissa to "pretend read" a book aloud to herself, twice.

Generally, I frequently observed books to be lying around the kitchen table and on the living room floor. Occasionally there was also paper, crayons and pencils on the kitchen table. Nicole also had the "Junior Scrabble" game out in the living room a few times. The TV was frequently on, but only occasionally was it being watched for an extended period of time. There was frequently a newspaper in the home.

Data Narrative
Family: Augustine

Veronica is a 32 year old, never married, African-American. She is a high school graduate and has attended college for about one semester. She was born and educated (through high school) in New Haven, Conn. where she also attended a business college for about eight months. Veronica is on welfare and lives in a public housing project in Brookline. Her home contains many books, children's and adult, and everyone in the home reads on a daily basis. I've seen the four school age children do homework involving reading and writing and I've also seen them read newspapers, magazines and comic books. Samples of the children's school work, such as poems, drawings, etc. are displayed on the refrigerator and bulletin board in the kitchen. There are also school activities schedules, spelling award certificates, letters, birthday cards, etc. that are displayed on the refrigerator and bulletin board. The gist is that the children are surrounded by written materials in every room in the apartment.

Veronica is also very active in the parent's association for the complex which provides activities for the children living in the complex. One of the activities is a "homework" room where two public school teachers help children with their homework or other help they may need. During the school year the homework room operates for two hours in the evening after school. There is also a story telling time for younger children on Thursday evening during which one of the parents reads stories to the children. Veronica's children are involved in all or most of the activities provided by the parents' association. All of Veronica's children are in age-appropriate grades in their school.

Veronica has five children:
1. Imani, 13, 6th grade
2. Aaron, 10, 4th grade
3. Andrew, 9, 3rd grade
4. Miya, 6, 1st grade
5. Ayanna, 15 months old

The four older children attend Lawrence Public School on Francis street in Brookline.

Data Narrative
Family: Bourne

The Bourne family consits of Keriann, 26, Larry, 38, Shannon, 4, and Dereck, 2.

Shannon is 4.5 years old. Shannon scored 12 on the Clay Concepts of Print task. This score has an associated stanine of 5 for 5 to 7 year old Europeans. Over the period of observation, I could trace the origins for elements in her writing samples to "teaching events" in her home. Keriann focuses a good deal of her attention on developing Shannon's ability. Shannon is rewarded verbvally and with affection for any performance that demonstrates her ability. Time playing with paper and writing implements is a prominent and daily activity. Shannon refers to scraps of paper with her own emergent writing as "importants." They are given to her mothr or myself as gifts or stored in Shannon's pocketbook where she keeps her "personals."

As a result of her mothr's close attention and drill on specific letter recognition, Shannon is adept at print. In this area, she appears confident and is willing to experiment. For instance, she was making cursive-like letters in imitation of her mother's writing near the end of the observation period.

Shannon is not as confident when asked to demonstrate skills that would be more closely related to emergent reading. She was reluctant to attempt both pretend book reading and telling me a story about an event. In each case, the tasks took several attempts and finally were completed when Shannon initiated the activity. This is partially a reflection of her personality as she is independent and self-determined.

Over the course of observation, there were many uses of print for practical functions in this family's daily activity. Reading the newspaper for information and entertainment seemed to be a daily event for the father, Larry. However, Shannon is more closely allied with her mother and consistently imitates her mother's activity. Although Keriann reports that reading stories to the children is a frequent activity, the number of observed events is sparse in comparison to the daily activity of writing. Keriann reports that she only reads books for the children not herself. I have observed two occasions where Keriann read a book to the children. On one occasion, she read a book that could be characterized as a song rather than a narrative. The children participated and most often identified new words in the framework of the lyrics. On the other occasion, Keriann read <u>I'll Love You Always</u> to Shannon. Within a few minutes, Shannon repeated the book from memory for her younger brogher Dereck. Shannon sat on the sofa, as her mother had, and "read" the book while whe turned the pages for Dereck.

Functional uses of print are incorporated in the family's daily activities. One of Shannon's chores is to keep track of the

weeks on a monthly calendar posted on the refrigerator. Keriann keeps an appointment book for her activities which include volunteer obligations with Even Start and Head Start. On one occasion when Keriann and I were scheduling our next appointment, Shannon sat beside us and recorded information in her own miniature appointment book. Reading horoscopes in the daily paper, checking lottery numbers, and clipping store coupons are part of the family's routine. The TV guide is consulted frequently.

Keriann makes regular trips to the Ames Stationary Company to pick up free paper supplies for Shannon and Dereck who is 2.5 years old. She keeps the paper supply and a large box of stencils, crayons, markers, and pencils on a set of shelves in the kitchen. This set of shelves is the center for writing supplies in this orderly household. There is a container of pens and a list of frequently used numbers near the telephone. Larry's copy of The Frugal Gourmet is displayed on the shelves. This is the only adult book I've seen in the house. Shannon has about 10 children's books and a collection of workbooks in her bedroom.

Getting a job is a frequent topic of conversation for Keriann. She sees that time in the future when both children are in primary school. The family has been supported by Aid for Dependent Children since Shannon was an infant. Larry, 38, is Dereck's biological father and has been with the family since Shannon was 10-months old. Both children use his last name.

Larry had his fourth back operation just as we ended the observation period. He had just begun to receive Social Security support due to his disability. Previously he had been employed as a laborer on swimming pool installations.

Both parents are actively engaged with the children. The children receive a good deal of attention, affection and time. Keriann is the primary manager of daily activity. Their lives are structured and the routine is predictable. The house itself is always clean and orderly. The children are so accustomed to daily structure that they can get cranky when the normal schedule changes. Shannon, in particular, copies her mother's habilts and immediately picks up after herself when she is finished with an activity. Although they have a very limited income, there is no immediate sense of the shortage. The family's clothes and furnishings for the house are modest and tasteful.

Keriann is the middle child from a family of 10. She says that her own mother kept a very firm schedule for details of daily life. For instance, showers for each child were scheduled for morning or evening to facilitate the large family. In addition to her own family, Keriann's mother provided daycare for Catholic Charities. Keriann's mother works as a secretary for Harvard University Health Service. Her father no longer works due to poor health. Her brothers and sisters have middle level, modest income occupations (mail man, childcare worker, mechanic, etc.).

Keriann is a high schoo graduate but feels that she didn't "learn anything in school." She is particularly concerned about poor spelling since it may be a barrier to jobs. Before she had children, Keriann was a secretary in an insurance firm.

Keriann and Larry grew up in the Mystic Housing projects just a few blocks from their current home. Larry is one of eight siblings. He left school in the 8th grade after his mother died. According to Keriann, the state tried to place the children in foster homes. Keriann said Larry rebelled and lived on his own in the basement of the housing project. During adolesence Larry supported himself by stealing, according to Keriann.

Larry was in the hospital for two moths rather than the ten days thay they had anticipated for the operation. They purchased a car for Keriann's Mother's Day present. Keriann reports that Shannon will be going to kindergarten next year. Since they are on the Medford-Somerville line, Medford has agreed to take Shannon in their program.

Over the course of the observation period, I developed a tremendous respect for this family. In particular, I admire the way Keriann reaises her children. I miss the children and spending time with this family.

Data Narrative
Family: Black

The Black family consists of Beatrice (Bea), the mother, and four children. The children are James, 9, Thomas, 7, and the twins, Isaiah and Vapor MaKia, both 5. The family calls Vapor, "MaKia" because it is her middle name and her grandmother is named Vapor. This way MaKia and her grandmother will not get mixed up. Bea's brother, Norman, also stopped by to visit on occasions, as well as the children's father. The Black family appeared to use literacy a great deal during the time that I visited.

There were several literacy artifacts in the home. There were greeting cards, magnetic letters on the refrigerator door, school papers laying around, sewing patterns, and other miscellaneous papers with print. All of the children had notebooks to write and draw in. The pencil sharpener was in the kitchen and appeared to be used often.

Bea was observed looking over school papers, helping the childen with homework, spelling words out loud, and she attends a community class on how to keep children safe, which allows her to use literacy. For example, she read the agenda for the class. Bea is also the Sunday School church secretary, in which she records and reports the attendance and offernings of the Sunday School classes.

The Black family is very devoted to attending church every Sunday. I had the opportunity to attend church with them. I observed several literacy events, such as reading the Bible, writing and discussing what was learned in Sunday School, and the children had a chance to practice writing their names and coloring.

All of the Black children like to draw. They were observedd on several occasions making pictures. Thomas and James usually wrote some type of print over their pictures. Isaiah and MaKia also wrote some type of print on some occasions over their pictures.

MaKia like to write in my notebook. She wrote from right to left, including her name, "REPAV". She usually wrote a series of letters right to left and told me what it said. She was also observed saying she likes to read and she showed me her favorite book.

Isaiah's room had about half of the children's books in the home. They were kept on his dresser. There were about fifty. About the same amount of chidlren's books were in James' room. Isaiah also had several posters on his wall that contained print. He was observed looking at books and writing numbers. James collected baseball cards. Bea and James were observed actually reading a baseball card. Thomas was observed practicing reading. He read to his mother and to the family on two occasions. Norman and the children's father were also observed involved in literacy

events. The father was observed reading a program from MaKia's class and Norman brought over a letter he had written. He was observed looking at it (or perhaps skimming it).

The twins were the focal children for the research. Both of their teachers told me that their curriculum was part whole language. The other part was on skills, such as letters and sounds. The twins seemed to enjoy school and reading and writing. Bea was a volunteer at the school. She helped out in both MaKia and Isaiah's classrooms.

Bea was found to be very interested in her children's achievements. In addition to volunteering at the school, she helped the children with their homework, helped MaKia write letters, helped Isaiah with counting, and she took the children places when they could have fun and learn. The children had been to museums, plays, parks, and the Prudential Building. Bea said that she graduated from high school and plans to look into going back to school when the twins get into first grade.

Overall, the Black family seemed to always be involved in literacy. The television was only turned on on one occasion, when Norman wanted to watch the news. Bea said that she reads books to the children. However, this was not observed. Many other literacy events were observed. I will miss the Black family the most out of all of the families I visited. They were the most hospitable and allowed me to go places with them. They even had a place for me at the dinner table.

On the last visit, I giave Bea a plant because she has many beautiful plants, James baseball cards, Thomas a neon toothbrush because he doesn't like to brush his teeth, and the twins some small notebooks and letter/number stickers. I also secretly gave Bea a small bag of carmel popcorn because she likes "J-U-N-K-F-O-O-D". They told me I have a place to stay if I ever make it back to Boston.

Data Narrative
Family: Cook

The Cook family consists of Lisa, the mother, William Sr., the father, Kayseana, age 6, Keisha, age 5, and William, Jr. eighteen months. Kayseana and Keisha were the two focal children. The Cook family is a literate family that uses literacy in their home in several ways.

Lisa said she only made it to the eleventh grade while William, Sr. finished high school. She may have dropped out because she became pregnant with Kayseana as a teenager. The parents are not married. Both parents appeared to be literate because they were observed either reading or writing. For example, both parents read the report on Kayseana that was done by her kindergarten teacher. This report discussed things such as Kayseans's motivation, interests, and problem solving skills. The Cook parents were happy to see that Kayseana enjoyed reading. They felt that it was a good sign that she would do well later in the first grade. Lisa was also observed reading bills, looking at store ads in the newspaper, which they received regularly, and signing a permission slip.

The family spent time watching videos of rap songs and rhythm and blues songs on BET cable channel and watching situation comedies. Therefore, the literacy events may have been somewhat limited because of this. For example, the children go to bed while the television is on in their room. They usually fall asleep while trying to watch the shows that come on at 8:30.

Since the television was on most of the time that I visited the home, there were times when a family member read from the television. For example, Kayseana read "The End" from the television screen.

Kayseana appeared to know several letters and sounds. Since I did not get the opportunity to talk to her teacher, it is assumed that letters and their accompanying sounds were part of the curriculum in her class. Kayseana also had homework every night in which she was to have her mother read a book to her and Kaysean was to try to read it back to her. This information about the homework was given to me by Lisa. However, I only observed Lisa reading part of a book to Kayseana. She stopped reading it because she said the story was "stupid." The book was a nonsense story with word family words such as "Dan" and "Nan" and "pig" and "wig". Therefore, it appeared that Lisa had a sense of what a good storybook should sound like.

Lisa also told me that Kayseana picks a book out at the library every week. She said Kayseana just picks books out from the picture and they are usually "very long". Lisa said it takes a long time to read them to her. However, I never observed her reading a library book to her.

Kayseana was observed as practicing writing words from a toy and a book and drawing pictures. Keisha was also observed drawing pictures and writing words. However, her words were a string of letters in which she gave names to. Kayseana was very outspoken and motivated towards literacy. Keisha was very quiet and usually started writing or making pictures because she saw Kayseana doing it.

I did not get a chance to talk to Keisha's teacher either. Keisha is attending a Head Start program at a church. However, Lisa told me that she was disappointed in what Keisha was being taught (or not being taught) at school. For example, Keisha didn't appear to know how to write her name.

William was observed and encouraged to scribble on a writing toy. However, most of the time he was observed playing with his minatured colored basketballs, dancing to music, or taking a nap.

There were some artifacts of literacy events in the home. For example, the refrigerator door was filled with reminder notes and names and phone numbers. There were also greeting cards displayed, especially right after Kayseana's and William's birthdays. Some of the pictures on the wall contained print such as "we love daddy" on the picture of the three children. Lisa showed me about six children's books that belonged to Kayseana. She said there were other books in a box someplace but she didn't know where it was.

Overall, the Cook family appeared to be literate, used literacy moderately, and were concerned that their children do well in schoo with literacy. I will miss the opportunity to visit their home. I gave the family McDonald's gift certificates. From seeing all of the Happy Meal toys, they appeared to go there often. The girls also received small notebooks to write in and letter stickers.

Data Narrative
Family: Cummings

The members of this family include Jewell, the mother, Dearron, 5 yrs old, the focal child, and his sisters Donsha, 3, and Tonisha, 1 years old.

Literacy artifacts found in this home were primarily correspondence from Dearron's school and from various city agencies. There was no print on the walls or in the children's bedgrroms.

The literacy events observed in this home were activities between Donsha and Dearron such as writing letters or identifying letters and 'reading'.

Jewell was observed on two occasions reading mail.

Data Narrative
Family: Ervin

The primary participants in the Ervin family observations include Muriel, age 24, and her son Joshua, age 5; Ellie, age 23, and her children Alicia, age 7, Ariel, age 2, and Jamie, age 6 months; and Walter, age 54, the father of Muriel and Ellie. My observations also occasionally included Muriel's husband and new boyfriend, Ellie's boyfriends, and numerous other men, women and children who live in the Old Colony Housing Projects neare the Ervin family apartment.

Muriel is involved with a family intervention program called Julie's Family Learning Program. For most of this year (starting in September '92), however, her attendance was very sporadic and she rarely attended any education programs or tutoring sessions.

Muriel was not involved in very many literacy events. She had a restraining order on her husband which I observed her to read and to subsequently show to her friends and family and her husband on a few occasions. I also observed her to write a letter to her boyfriend. It is also quite probable that she wrote in her journal sometime during my observation period, given that she told me that she did and I observed her journal to be out on her bed. During Ariel's birthday party, Muriel wrote her name on a card. After the party she signed her name and a brief message on the back of some of the photographs of the party and gave the photos to friends.

Joshua was the focal child of this family. He attends the Montessori pre-school over at JFLP. His attendance was sporadic (once or twice a week), however, because of personal problems that Muriel was having.

Joshua played Nintendo much of the time that I was in their home. There was, for brief moments, some print on the screen during the games but it was not necessary to read this print in order to effectively play the game and Joshua never gave any indication that he noticed it and/or that it mattered to him.

Joshua also watched a lot of TV. One show that he watched twice during my observation period involved a narrator reading a storybook and the the pages (but no print) being shown on the screen. The pages of the book took up the entire screen, and therefore it was not apparent that a book was being read, except for the fact that for a brief flash of a second in the introductory moments of the show there was a picture of a girl holding a book in her lap.

On one occasion Joshua was flipping through a book that had been given to Muriel by the staff at JFLP. It had not been read to him, and although he requested that it be read to him during one of my visits, no adult in the family was able to and/or chose to respond his request. On another instance, I observed Joshua to flip through a Nintendo instruction booklet, slowly looking over

each page as he went along.

Ellie, like Muriel, was not involved in a lot of literacy events during my observations. On one occasion she read a letter give to her by a friend; on another occasion she wrote out a grocery list to send with Alicia to the store; once I observed her to quickly look over Alicia's report card; once she described the pictures in a storybook to Ariel which Ariel brought the book over to her; during Ariel's birthday party she signed her name to a card and read alound the printed message on the cake. One morning Ellie was involved in recertifying herself and her children for AFDC. On this occasion, she looked over several papers in order to try and find birth certificates, she looked for a number in the phone book, she read a letter and referred to it in a phone conversation, and she requested that her father write her a letter.

Alicia is in the first grade at a Boston Public School. She was the most consistent participant re involvement in literacy events. She often brought home papers from school, but I never observed anyone to read them or even look at them when she brought them home. On a few occasions I observed Alicia to work on her homework. During Ariel's birthday party, Alicia took a notebook that had been given out for free at CVS, and asked all people in attendance to sign their name on it. Once I observed her to attempt to read a grocery list that her mother had given to her.

Ariel's involvement with any literacy events was minimal. They included her taking a pen and scribbling on an envelope that was lying on the coffee table; once she picked up a book that was on the couch and flipped through it and on another occasion she picked up a book that was in Jamie's baby carrieage and took it to her mom who then talked to her about the pictures on each psage; once she pulled paper off of the refrigerator and began to look at them and crumple them (until an adult came and took them from her).

I once observed Jamie to play with a printed cigarette advertisement, chewing on it and crumbling it up.

In general: There were not very many books in the house. In Muriel's bedroom, there were 4 or 5 children's books and 5 or 6 adult books, but I never observed an adult to read a book to a child or an adult reading any book to themselves. In the main living room, there were often various video advertisements and once I saw a magazine and once a coloring book.

Much of the environment print consisted of cigarettes, soda cans and beer. There were several lettersj on the refrigerator --- from social service agencies, governmental agencies, and a child-care schedule.

Data Narrative
Family: Ferris

The participants in this family are Kelly, the mother, age 24, Scott, her husband, age 28, and the children, Joseph, age 7, Kaitlyn, age 5, Kevin, age 4, and Kimberly, age 2. Occasionally (adult and child) members of both Kelly's and Scott's families were also a part of my observations.

Kelly is currently involved at Julie's Family Learning Program. She does not attend very many of their classes there, but she does work with a tutor once or twice a month in order to get assistance as she is preparing to take the GED test. during the time of my observations, she was beginning to take some of the component tests of the GED. She is feeling particularly motivated to take the GED because she has decided that she wants to go to community college in the fall.

The last school grade that Kelly completed was the 6th grade; she also told me that "she had stopped going to school a lot earlier" and that she "never liked school." From my observations at both JFLP and in her home, I would characterize Kelly as "low-literate" and "unable to perform her daily tasks and personal goals to her satisfaction" because of her lack of adequate literacy skills.

Because Kelly was in the midst of last-minute preparations for her GED testing during my observation period, I did observe her doing some reading and writing in the home. I observed her to occasionally read through a GED book and subsequently write down the answers to particular questions. Once, I observed her writing an essay. She did all of this while the TV was on and the kids were running around and playing, laughing, screaming and/ or crying.

I also once observed Kelly to write a note to Scott before leaving the apartment in order to communicate where she and the children were.

Scott worked five days a week as a manual laborer. I am not sure if he graduated from high school or not, but he did tell me that he sold drugs starting at age 14 and started using them (heavily) for short periods of time. I also observed him to read/ interpret his pay check in order to examine what overtime pay he had received, and what health care deductions had been made. Scott also did some quick reading and writing re a TV lottery game and trying to sell some furniture.

During the time of my observations, Joey was in "Kindergarten II", Kaitlyn was in Kindergarten; they were both in the same Boston Public School, going only a half-day in the afternoons. Kevin went to the Montesorri school offered through JFLP and Kimberly also received childcare at the JFLP Montessor school. Kelly was not very consistent about getting any of the kids to school, however,

and I observed that there would often be one or two days a week that she would keep them at home.

In general, all of the children loved to use pencils, crayons, markers and paper. Whenever anyone would give them paper and writing/ drawing implements, they would spend long periods of time using these materials. More than that, they were constantly asking me for paper (especially after I began administering the tasks, and they observed that I usually had a notebook with me.) They also would ask their parents for paper, but only occasionally was there blank paper available for them in the house.

When they were able to draw, Joey and Kaitlyn would both draw pictures and write their names and some other small words on their papers. Kevin would draw pictures and often ask a sibling or a parent to write a word or his name on his paper. Kimberly was most often content with just drawing, but on tow occasions, she drew a scribble and then specifically told one of her parents what word she believed she had just written.

The TV was almost constantly on, and occasionally Kelly, Scott or the children would pay attention to it. A couple of times there were some quick shots of someone reading a book off the screen which the kids were watching it.

In general: I never saw a story read aloud to the children, at bedtime or any other time during the day. Several times the children asked to be read to, however. I did not observe a single children's book in the home. Towards the end of my observation period, their cousin gave the kids a pile of coloring books that each had some printed words or phrases on the bottom of each page.

There most always were one or two pencils or pens lying around, and a sheet or two of blank writing paper. There was not a great deal of environmental print, but there were some of the children's artwork up on the kitchen wall and refrigerator, a few notices about doctors' appointments, and a few domestic items such as a box of Tide, cans of soda, cereal boxes, and take-out pizza boxes.

Data Narrative
Family: Hart

The participants in this family include Linda, 24, mother; Mark, father; Kenny, 5, son; Linda's mother; Melissa, 10, Linda's sister; Tina, Linda's friend.

Linda is a high school graduate. After high school, she attended secretarial school for ten months. She is a full-time secretary. Linda is a Born-Again Christian. She mentioned on occasion how she read the Bible. When Kenny requested a particular children's Bible story read to him, she located the story directly. Linda spent most of her time with Kenny. She and Kenny lived alone in the apartment. With Kenny, she was observed playing letter games, writing words and letters, decoding words and letters, reading many children's books and children's Bible stories, helping Kenny with his homework, helping Kenny decode, spelling words aloud for Kenny, playing with cards with print with Kenny, and discussing stories she read with Kenny. Linda was also observed completing an application with Tina. Linda was observed looking up a phone number in a commercial phone directory.

Kenny told me that Mark gave him printed cards (trading cards, alphabet cards). Mark is a high school graduate. He graduated from a four year electrical trade school. Currently, he is attending truck driving school. Mark is a security guard.

Kenny was very active in relation to literacy. He led all literacy games with Linda. The only exeption was storytime. Both Linda and Kenny led storytime. Kenny would play with magnetic alphabet letters, alphabet cards, sports trading cards. He would lead writing games in which letters and names were written spontaneously, write words spelled aloud by Linda (he requested the spelling), or copied from another source (usually Linda's writing). He would attempt to decode almost any combination of letters whether or not the combination formed an actual English word. In all of his literacy games, Kenny was very aware of the print. He talked about the words or letters, identified them, or attempted to decode them. He often led games with his children's books and children's Bible stories. In these games, he would talk about the stories, request certain portions to be read to him and locate particular words. Kenny was assisted by Linda on his homework. Kenny watched television on a few occasions. The programs contained print at times. Kenny played Nintendo on a few occasions. The cassette and the television screen contained print on these occasios.

Linda's mother was observed watching the television program, "Jeopardy". Melissa was observed watching television which at times contained print.

Tina came to visit Linda in order to seek her help in completeing an application for her son to go to summer camp. Both Tina and Linda read aloud and silently the application. Linda

explained what they read to Tina. Linda would tell Tina what to write and on which line to write it.

In the house were many children's books, many Bibles, many self-help books, evangelical training manuals, school correspondence, newsletters, Kenny's schoolwork, notes, alphabetic letters on the wall. There were clothing and bedding with print. Kenny's work with print by him was on the walls. There were many writing instruments and blank paper. There were brochures and pamphlets. There were catalogues and phone directories. There were coupons, magnetic alphabet letters, alphabet letters puzzle, and activity books.

Data Narrative
Family: Howe

The participants of this family include Lakana, 37, mother; Dexter, 4, Focal Child; Jassen, 15, brother; Tacita, Jassen's girlfriend; Joe, Lakana's boyfriend; and Mimi, Lakana's girlfriend. Most of the time, Lakana and Dexter were alone.

Lakana arrived in the USA from her native country, Thailand, with her American husband when she was 24. Lakana usually conversed on the phone or in person and worked on her homework. She is within months of earning a regular high school diploma. When she was shopping for a car, she read classified ad magazines and nespapers. At most bedtimes, Lakana read children's books to Dexter. Lakana is unemployed and recently divorced.

Dexter always had the television on whether or not he watched it. He played with his toys mostly, but he also engaged in his library often. Dexter always played alone. He would talk about the toys, television programs, and books. On few occasions, he would illustrate or play Nintendo. At times, Dexter would illustrate. When he did, he usually insisted that Lakana write his name on his papers. Dexter attends Headstart.

Jassen and Tacita were present only twice during data gathering visits. The walls of Jassen's bedroom were covered with print. Overall, Jassen performed well in school, according to Lakana.

The few times in which Joe was present during data gathering visits, he was rushing to leave for work in the morning. Joe is college educated and has a professional job. He also moonlights as a bartender. On one visit Joe watched television news. Dexter believes Joe to be his father.

Mimi conversed with Lakana during most of her visits. She usually arrived with a magazine or book in hand. Mimi talked about having shared storytime for long peirods with Dexter.

In general, there was little interaction between Dexter and the other participants in the household. Most interaction consisted of disciplinging Dexter and bargaining with him.

There were various artifacts of print used consistently in the apartment. These were magazines, books, mail, ads, cable guide, coupons, video and Nintendo cassettes, trading cards, labeled toys, reminder notes, posters with print, cookbooks, phone and address books, labeled clothing, print on both TV screens, game manuals, checks, labeled foods and spices, Lakana's homework, and writing on walls.

Data Narrative
Family: Jones

The Jones family consists of Ella, the mother, Tonya, her fifteen year old daughter, and John, her five year old son. Ella also has another daugher, Reesa, and a grandson, Kendale, Ressa's son. Kendale is about two years old. They visited the home on a few occasions. The Jackson family appeared to be very close because they talked and played with each other most of the time I spent in their home. They used literacy in their home but it was very limited.

Ella appeared to be illiterate because on two occasions she asked me to read food labels and John's homework for her. She told me that she couldn't read because no one helped her in school. She made it to the sixth grade. This illiteracy kept her from doing literacy events. However, she could read numbers. I observed her playing a numbers game called Wingo from the newspaper and she played the lottery. She also said she did her own bills.

Tonya was observed spending time on the phone, playing with John and Kendale and watching television. She was also observed on one occasion helping John with his homework, which he had every night. John's homework was to put in the missing letters in color words For example, one word read, "bl_ck." She instructed him on which letters to put in these color words. She did this in their bedroom, which made it seem like they wanted privacy. I was not sure exactly how she instructed him. But I did, on occasion, hear her directly tell him which letters to put into the blanks. Ella wanted me to read the words to John when he was finished. Although Tonya helping John with his homework was only observed once, Ella told me that Tonya helps him every night.

John was observed watching TV, playing with his toys, and playing with Kendale. He watched Sesame Street on a few occasions. It was assumed that he watched it often because he knew the words to the show's song. He told me that he didn't know how to read, but he appeared to know all of his letters because he read them off to me on a stencil set. He also knew how to write his first and last name. On one occasion he looked at a Teddy Ruxpin book with his Teddy Ruxpin toy. But he was not following along with the tape of the story.

John is currently in the kindergarten at a daycare center. Ella told me that the public school was all filled up when she tried to get him into that kindergarten program. His classroom didn't have any books and the teacher did not read to them from story books. But she did teach what was in the school's curriculum, such as numbers, letters, colors, shapes, and days of the week. There were displays on the wall to indicate this.

No one appeared to read to John at home either because it was never observed. However, Ella showed me about 50 children's books, kept in a knapsack in the closet, and said that Tonya reads to him

sometimes. I was not aware of these books until during the final interview when I asked about books in the home. She told me these books were kept put up so Kendale wouldn't mess them up. She said that when John is older and has learned how to read then she would take them out for him.

I noticed some other literacy artifacts which no one was using during my visits. I noticed bills, prescription medicine, newspapers, magnetic letters on the refrigerator (but they were not formed into any words), food labels, magazines, labels on personal care items, print on TV, print on videos and cassette tapes, a calendar, encyclopedias, and an apartment application.

Other literacy events noticed in the home included Ella and Tony looking at store ads, a neighbor reading a lottery ticket, Kendale and John coloring, and John play drawing. Therefore, the literacy events, as previously stated, were very limited. However, it did appear that Ella felt that John learning literacy was important. For example, she put him in a kindergarten program, appeared to make sure he did his homework, and bought him several books that he could read once he learned. Although, she didn't see the importance of leaving the books out for John to pretend to read and look at before he learns to read.

My visits included the times John woke up in the mornings to the times he went to bed. They lasted over a period of several months. I got to know the family very well. It was hard to say good-bye. I will send a letter to John, along with a book of black poetry that I ordered. Now that the observations are over, I miss having the opportunity to visit their home.

Data Narrative
Family: Kasten

The Kasten family consists of Lisa, 24, Danny, 26, Jamie, 6, Ryan, 3, and Quenton, 2. Throughout most of the study the Kastens lived with Danny's parents, Nancy and Billy, and Danny's sister Caroline. For a short time, 11-year-old Dione and her mother moved in when they had a fire in their own apartment. Danny and Lisa left their in-laws home around Christmas time. They lived first with Lisa's friend and then in a homeless shelter in Lynne. In February, they moved back to Danny's parents house.

Jamie Marie Kasten was 5 years old when the study began. She turned 6 on May 9, 1993. She scored 16 on Marie Clay's Concepts of Print Task. When the family temporarily relocated to a homeless shelter, Jamie had complained that they only played at her new school. When her mother and I were working out a conversion problem in cooking, Jamie helped by identifying instructions in a cookbook. Jamie has shown several times that she recognizes her brother's names. For example, she identified her brother Quenton's name, pointing to the name in a newspaper clipping. She once asked me if I would teach her to read.

The family has returned to their in-laws home to live and Jamie is back in her former kindergarten. Her teacher says she will not make a report on Jamie this year because "she isn't ready to work yet." Jamie says kindergarten is "very hard."

The Kasten house has many books. There are two shelves with children's books stacked horizontally for Jamie, Ryan, and Quenton. The living room has a wall of bookshelves with adult books on home improvement and cooking. The bathroom always has a collection of magazines and nespapers. Children's art work is displayed around the home and labeled with the child's name. There is a sampler with the serenity prayer displayed in one of the bedrooms.

Once during the course of this study, the father's sister administered intelligence tests to jamie and her parents. Caroline is a psychology student at Tufts and practiced administering the tests with her family.

Several literacy events in this home focussed around cooking. The mother, Lisa, often talked about recipes and occasionally consulted cookbooks. At Christmas time, Jamie received a store and set of children's packaged food. Preparing this food involved reading directions and labels. Jamie identified some of the directions by associating them with pictures.

Lisa was often engaged in homework. During the course of this study she prepared for and completed her GED. The father, Danny, also had dropped out of high school in the 10th grade. He completed his GED in the Marine Corps. Danny often read books for recovering alcholics. Throughout the study he was attending Alcholics Anonymous meetings. His father's alcholism was the

subject for much conversation in the home. At the end of the study, the family joined the Mormon church and began family study once a week using a workbook from the church.

Lisa has recently taken a job preparing microfiche for Anadom Corporation. Danny is working as a roofer and reports making $18 an hour. When the study began in late Novermber, Danny was out of work due to the season and the cut-back on construction in this area. The family had moved in with Danny's parents around April of 1992. At Christmas time, they relocated to a homeless shelter. They had hoped to get into public housing and get assistance with medical insurance. By February, Danny had located work on a slate roof installation. They moved back with his family.

The family took clothing, children's toys and books with them to the homeless shelter. At the shelter they had about 15 children's books that Lisa said were Christmas presents. There were three adult books, Loving Each Other, Weight Watcher's Cookbook, and a Math study manual. This math guide belonged to Danny who had said earlier that math is his weak area.

I miss seeing Jamie. She is a charming and affectionate child. The family is welcoming. They always offered hospitality and invitations to participate in family events whether they were at Danny's parents or at the shelter. There were many displays of affection between parents, grandparents, and the children. All three children are lively and inquisitive. Danny and Lisa put forth a lot of effort to improve their situation and care for their family.

Data Narrative
Family: Larsen

The Larsen family consists of June, age 24, the mother, Harry, age 24, her husband, and their children Sean, age 6, and Michael, age 3. Sean was the focal child in my observations of the family. Various members of Harry's family and June's family were also sporadically a part of the normal activities for the Mathias family. These relatives did not create nor were they involved in any significant type or number of literacy events, however.

At the time of my observations, which spanned December 1992 through April 1993, June was attending Bunker Hill Community College two evenings a week. She was also working an internship at a hospital 3 to 5 afternoons a week as part of one of her courses. She would also occasionally come in to Julie's Family Learning Program, a family development program involving educational classes for both academic development as well as parenting issues. She rarely attended any classes, however -- instead she would come in to receive informal counselling and guidance re her college work and her children and/or to spend time socializing with other women in the program.

Both of the children attended the Montessori school that is run by Julie's Family Learning Program. Sean had just turned 7 in December and attended the Montessori Kindergarten. Michael was in the same classroom as Sean, but he was considered to be in the "Pre-school" group (and not the "kindergarten" group). They both attended class 5 days a week, from 9:30 to 12:30 p.m. on a fairly regular basis. Their instruction was fairly individualized, and was oriented towards the basics of learning to read and write, and recognize letters and some sounds; they were also read to at least once a day in this classroom.

Harry works Monday through Friday as a maintenance worker for the Old Colony (federally-funded) housing project located about a half a mile down the street from their home. He has a high school diploma.

During my visits, June was generally fairly involved with the children, either getting them ready for school, feeding them, or disciplining them, or she was playing some sort of board/manufactured game with the. Some of the games involved print, such as "Uncle Wiggly", a game that involved her reading some of the cards and messages on a game board aloud to the boys. She also played Nintendo quite a bit with Sean. I observed June reading a personal letter once, and I observed (once) the existence of a shopping list and some school-related forms for Sean that were written out in her handwriting. Other than that, I never observed her reading any of her own school work and I never observed any bedtime storybook reading.

Sean spent an enormous amount of time playing Nintendo or watching TV. This time was broken up, however, by his playing

games with June and Michael. He also occasionally played games by himself, two of which involved the use of print (i.e. a computerized math and spelling game and a game with word cards). Sean also acknowledged the fact that many of his play-toys had printed labels on them that indicated what toy they were. Both he and Michael also enjoyed drawing with magic markers and pencils. There were always a few pens and pencils lying around, and occasionally there was a stack of computer paper and coloring books available for them to draw on. Sean never created any form of print when drawing, except once which I asked him to.

Sean spent some time at the Boys and Girls Club, and in the main JFLP office (they are in the same building). He occasionally played with the computers in the JFLP office with the guidance of a staff member who tried to help him create some small words.

Michael, like Sean, participated in most of the family games. He also watched a great deal of TV. He was exposed to some reading of print that occurred on the TV, and he acknowledged the fact that he had print on some of his clothing. Michael tried to involve June in his efforts to understand the significance of this print, as well as one or two other instnces of environmental print.

Harry, like June, was very interactive with the two boys, although he did not play any board/ manufactured games with them; His interactions primarily involved his bieng affectionate with the boys, throwing a football, or talking with them while they were watching hockey on TV together. He, like June, never was observed to read a bed-time story to either of the boys.

There was an abundance of storybooks in the home --- I observed approximately 45 books in the boys' bedroom and two large canvas bags full of books in the main room of the apartment. The boys indicated some familiarity with some of the books in their bedroom, but I never observed any of these books being read to them.

There were also two baskets full of papers in their living room -- papers related to June's school, the boys' school, and generic "junk mail". Only on a very few occasions did I observe any of these papers being read.

Sean had some of his school work up on the refrigerator, and some of this had print on it. There were several other instances of environmental print up in their kitchen, most of which was very ordinary, i.e., cereal, detergent, etc.

Data Narrative
Family: Lawrence

The participants in this family include Helen, 26, mother; Joe, 26, father; Joey, 6, focal child; Michael, 3, brother; Helen, 11 and Brian, 11, cousins; Grace, aunt; Jennifer, 5 and jason, 7, neighbor children; and Berta, mother of neighbor children.

Helen was very involved in her children's education and welfare. She worked at a donut shop on weekends when Joe was at home so that a parent was always present with the children. She has a GED and plans to go to nursing school once Michael is in school. Helen referred to her personal recipe book at times. These recipes were handwritten by her in a spiral notebook. Helen recorded appointments on the kitchen calendar and in her appointment book. She wrote checks as well. Helen took great care to initiate, assist, and enrich Joey's homework. She read a children's story to the children on all but one bedtime. She stays informed via literature and conversations with professionals on the physical and educational progress of her children. She enjoys and actively participates in Evenstart and other parent education programs. On few occaions, she played with the children; however, usually she attended to teaching the childrenhow to behave acceptably.

Joe arrived in the USA from his native country of Portugal when he was nine. He attended bilingual classes in the USA. Joe subsequently dropped out of school in the tenth grade. He felt unsuccessful. Upon Helen's urging he went to adult school to earn his GED. He experienced limited progress there as well. Later, he was tutored by Evenstart. Through testing, Evenstart determined that Joe orally read at a sixth grade level and comprehended on a fourth grade level. Joe says he hates reading and avoids it. He never read a children's story to the boys on weekend bedtimes when Helen was at work. On one occasion while the Lawrence's were in the process of buying a home, however, Joe reviewed mortgage documents. Joe also takes an interest in Joey's education. He attended a school parent night with Helen and participated in Joey's hoework routine. When Joe was home, however, he spent most of his time watching television. Joe is a janitor. He used to be a truck driver, but due to a serious back injury, he is no longer able to perform all the duties of this line of work.

Joey, Michael, Cousin Helen, Brian, Jennifer, and Jason spent most of their time playing. They played alone, with each other, and with toys. Nintendo constituted a substantial portion of playtime. Joey, a kindergartner, showed much interest in the contents of the researcher's notebook. He regularly requested that the researcher read excerpts of the notes. During initial data gathering visits, Joey and Michael took charge of the researcher's notebook and wrote in it. Later, they did the same with their mother's appointment book. Joey was cognizant of appointments written on the kitchen calendar and in Helen's appointment book. He referred to them on occasions. At times, Cousin Helen would

lead writing games or read to the younger children.

The house contained a limited number of print related aritfacts. There were less than ten children's books. There were less than ten adult books or magazines. There was a supply of newspapers, but these were used to line the birdcage. There was consistent presence of written appointments on calendars and Helen's appointment book, children's artwork with print, Nintendo cassettes, labels on toys, public assistance documents, newspletters, labeled moving boxes, labeled clothing, mail, trading cards, and bills. Mortgage papers were also prevalent once the Lawrence's were engaged in the purchase of a home. There were children's posters with print and some religious plaques with print in Portuguese. Print on the two television screens was also prevalent.

Data Narrative
Family: Morley

The participants in the study were Donna, the mother, Jahmal, the focal child and Johnny, Jahmal's father. The literacy events in this home were varied. Donna is enrolled in an adult education program to obtain her GED. Consequently, Donna does homework on a regular basis. This homework consisted of reading paragraphs and answering questions that were assigned by the teacher. Donna was also observed reading to Jahmal. This was observed on one occasion before bedtime, but on various occasions this was observed as an activity for Donna and Jahmal. Donna was also observed reading labels while cooking and reading mail. Donna also read informational texts such as pamphlets on schools for Jahmal, letters from Jahmal's school, notices from the apartment management and catalogues. Donna's father, brothers, and sisters live in Jamaica and Donna was observed on several occasions writing letters to these family members. Donna also wrote shopping lists every other week. Donna also read for pleasure and was observed on various occasions reading a novel, Waiting to Exhale by Terri McMillan. Donna completed the novel by the end of my visits.

Johnny frequently spent time in his bedroom during my visits, but he was observed reading labels for cooking as well as reading a cookbook. Johnny is an avid cook and on several occasions was observed reading a cookbook to plan special meals or desserts for the family. Johnny also reported reading to Jahmal occasionally, but this was not observed during my visits. Johnny was observed writing down information given to him over the phone on how to play a video game.

Jahmal was very interested in reading and writing. On several occasions he "pretended to read" by himself. He also enjoyed reading with his mom. Watching his mom do her homework gave him the desire to do "his homework." Towards the end of my visits, Jahmal had begun to do "homework". Donna was writing letters for Jahmal to trace as "homework." Donna and Jahmal would also read stories together, with Donna reading the text and Jahmal repeating after her.

Literacy artifacts in the home were various. Jahmal owned a collection of books which were kept on a bookshelf with adult books. These books were read to Jahmal frequently during visits. According to Donna, the were read to Jahmal occasionally at bedtime. The adult books included a dictionary and some textbooks. These books were not observed being used, but according to Donna and Johnny were sometimes used. A newspaper was frequently seen in use in the home. There were also notes and letters on the refrigerator. Jahmal had various posters in his room which contained print. There was also writing done by Jahmal on the refrigerator. mail was frequently seen in the home laying around as well as being read. Pamphlets for various school programs for Jahmal were seen in the home, as Donna was trying to find a school for Jahmal with a longer day.

Data Narrative
Family: Prince

Debbie is approximately 37 years old and lives in a three bedroom project apartment in Brookline with her husband and 3 children. Aimee, the subject child, is 7 years old as of July 4, 1993. Her brothers Jason and Dion are 18 and 21 years old respectively. Steven, Debbie's husband and Aimee's father seems to be in his late 30's or early 40's.

Aimee will be going into the first grade in the fall of 1993 (93-94 school year). She attended transitional kindergarten in the present school year (92-93) because Debbie said that school officials tested her and felt she was not ready for the first grade in the 92-93 school year. Debbie is very concerned and very sensitive about this. She seems to make an effort to help Aimee by providing her with books and surrounding her with writing (Aimee's room has the alphabet stenciled on the walls and other posters with writing on them.). Debbie says she reads to Aimee, but does not always read to her at bedtime. I did not witness any bedtime reading during my observations, but did witness Debbie reading (greeting cards at Aimee's request) to Aimee on one occasion. I feel that Debbie does read to Aimee more than I observed on my visits, but less than Debbie thinks she reads to Aimee.

Debbie was born and educated in Boston. She completed high school and 2 years of junior college. When I asked about her husband, she said that she was not familiar with the educational system of Barbados, where he was born and educated, but that she felt he may have completed up to 10 years of school. She does not know if he completed high school. Debbie describes herself as a secretary (she works part time, but says she was promoted and will be soon working full time). Steven works as a tow truck driver for the Red Cab company. On the basis of her salary, Debbie qualified for low income housing; she told me she pays $250 rent and includes utilities, heat and water. Although she was on welfare and food stamps at one time, she receives neither at this time.

Of her sons, Jason has completed high school and Dion is in his senior year. Her sons work sporadically and only with great prompting. Neither has ever held a full time job and Debbie is concerned that Dion will drop out of high school before receiving his diploma.

Printed material observed in the home: About 50 novels (Romance, Spy thrillers); a dictionary and thesaurus; adult Bible and children's Bible; magazines (TV Guide, Jet, Ebony and women's magazines); newspaper (has subscription to Boston Herald); children's books; movie videos (about 70); examples of Aimee's school work.

Data Narrative
Family: Small

The members of this family include Pontaya, the mother, Rodney, the father, and Chanda, the focal child. Observations were also done at the home of Pontaya's mother. The family members observed during these times were Jason, Pontaya's brother, Tammy and Leona, Pontaya's sisters and Mrs. Small, Pontaya's mother.

The literacy artifacts in the home of Pontaya included a shelf of approximately 30 adult books. There was also a shelf of approximately 20 children's books. There were notes on the refrigerator and some writing by Chanda in the kitchen.

Literacy events in the home were very infrequent. Pontaya was observed reading a book and the newspaper on two occasions. Rodney was never observed engaged in literacy events.

Chanda was observed writing a letter to a friend and showed me writing she had done with her father and at school.

In the home of Pontaya's mother there were many literacy artifacts. Mrs. Smith had various prayers on the walls around the home. The refrigerator was also covered with stickers containing phone numbers. Pontaya's siblings were also observed on several occasions doing homework.

Data Narrative
Family: Valeri

The participants in this family include Luis, 29, father; Berta, 28, mother; Berta's brother, 29; Jason, 7, son; Jennifer, 5, daughter; and Jessica, 1 daughter.

Luis arrived in the USA from his native country of Azures, Portugal when he was ten. He attended school in Portugal and in the public schools in Somerville. He graduated from high school with a diploma. He also attended three months of college. Luis was observed looking at the newspaper and sharing the articles with other adults. He discussed articles in the newspaper which gave the indication that he had read them. He was also observed looking at the print on an ointment tube and on school-parent correspondence.

Berta arrived in the USA from her native country of Azures, Portugal a few months before she married Luis. She married Luis when she was eighteen. Berta completed high school in Portugal. Berta was observed writing appointments on her calendar, reading school-parent correspondence, discussing school papers with her children, looking at Jason's literacy homework, sharing a book with Jessica, reading a book with Jennifer, watching and helping Jason read, signing her name, teaching Jennifer how to write her name, providing Jessica with paper and pen for her to scribble, helping Jennifer complete a page from an activity book, looking at print on frozen meals, playing with jennifer's electronic alphabet toy, and writing Jennifer's full name. Berta insists that the task of her children's academic learning is not her responsibility. According to her, this responsibility belongs to her children's teachers.

Berta's brother arrived in the USA from his native country of Azures, Portugal as an adult. Berta reports that he takes English courses from a local university. She also reports that he studied to be a bakery chef in Lisbon. In his room are bakery recipe books in English and Portuguese. He also has several photo albums which contain photos with handwritten captions.

Jason was observed reading a book aloud and asking for assistance in doing so. He was observed watching television which contained print at times. He was observed as referring to the print on the title of a Nintendo cassette. He coloured in colouring books with print. Jason was observed arriving home from school with an armful of papers on which he had written. Jason stated aloud the letters of Jennifer's name as Berta wrote them. Jason at times played with toys which were labeled with print.

Jennifer was observed pretending to read aloud Jessica's book. Jennifer read aloud an alphabet book with Berta. Jennifer often played with toys which were labeled with print. Jennifer played with an electronic alphabet toy. Jennifer traced and pointed to letters of names she knew. Jennifer looked at books occasionally. Jennifer pointed to and discussed her and Jason's Student of the

Month certificates. Jennifer discussed and pointed to signs in her room which bore her name and Jessica's name. Jennifer attempted to complete a page in an activity book with Berta's help. Jennifer coloured in colouring books with print. Jennifer watched television which contained print at times. Jennifer stated aloud the letters of her name as Berta wrote them.

Jessica was observed playing with books. Jessica scribbled on the wall and on paper Berta gave her. Jessica often tried to take my notebook and pen. Jessica watched television which at times contained print. When Berta identified illustrations in a book, Jessica pointed to them and repeated what Berta said.

The house contained clothing with print. It also contained plaques with print. There were children's books and activity books. There were newspapers, bills, posted children's schoolwork with print. There were food containers with print. There were printed video and Nintendo cassettes. There were printed magnets and printed papers on the refrigerator. There were magnetic alphabet letters. There were labeled toys. There were mail-order catalogues. There was print on the television screen often.

Data Narrative
Family: Williams

Twanda was separated from her husband, a Nigerian who resides in Washington state. The had been separated for about 8 months before Twanda returned to Washington in March. She has four children: Shawanda, 12, Harkem, 3, Toni, 4, and Anthony, born in December of 1993. Twanda was unemployed during the time I spent observing her family.

Twanda is 33 years old and her husband, Anthony, is 36 years old. Twanda completed 11 years of schooling; her husband completed high school and also completed technical training at Wentworth College in engineering. Twanda was born in Alabama, but grew up and attended school in Boston.

Twanda lived with her mother, Shirlene, in a one bedroom project apartment in Roxbury. Shirlene is unemployed and receives food stamps. A niece, Charletta and Charletta's mother (unemployed) and baby also stayed in the apartment at least a few days a week. By March Charletta's mother and her baby became residents of the apartment. Everyone slept on sofas (2), love seat, or on a mattress on the floor. Only Shirleen slept in the bedroom.

There were very few literacy events although there were a few children's books (less than 10) and a dictionary in the house. People in the house rarely wrote or read anything. I saw a homework event only once by Charletta, but never by any of Twanda's children. Twanda and her mother can read as demonstrated in my field notes. There was an absence of novels, newspapers, and magazines in the home.

The major form of family entertainment was cable television. Most of my observation time was spent watching them watching television.

Throughout my time with the family, various family members, cousins, nieces and nephews, aunts and neighbors wandered in and out of the house. There was rarely less than 5 people in the house when I arrived. During the course of a visit this number often expanded to 9 or more.

In march, Twanda returned to her husband in Washington State. She had not worked since leaving the state, but said she would try to return to her former job as a nursing assistant. Her husband is currently employed as an engineer. (Twanda was never clear on what kind of engineer her husband is).

Twanda said that she was very interested in her children's education and seemed to be active in their school. However, I saw her try to have Shawanda do her homework only once during the entire observation (Shawanda didn't do the the homework). I never observed her reading to the younger children or trying to teach

them to write. I think she is sincere about wanting a good education for her children, but probably thinks of it as a task for the schools.

APPENDIX B

Researcher: Dorothy Smith

	Sunday	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
AM	12/20/92 11-12:30 [second visit]	No visit due to Researcher's Attendance in classes	2/16/93 8:30-10	2/24/93 11-1 3-10-93 10-11	No visit due to Researcher's Attendance in Classes	2/19/93 8:30 — 12:15	2/13/93 9-Noon 1/23/93 11-12:30
pm	3/7/93 1-3	No visit due to Researcher's Attendance in classes	No visit due to Researcher's Attendance in classes	1/20/93 2-4:30	2/4/93 4:30-6	3/5/93 2-4	2/20/93 2-3:30
Night	1/31/93 6-7 Start date after 2nd was on	2/1/93 7:30-9 (No Field collection note) visit which 12-20-92	1/26/93 7-9	2/24/93 7-10:30	3/4/93 6:00 to 8:00 [Initial Visit 12-10-92 5:45-6:05 p.m.]	2/5/93 7:30 to 9:30	2/27/93 6-11

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APPENDIX C

Code Sheet for Family Literacy Study
V. Purcell-Gates
7-21-93

CODE	BEHAVIOR
Reading Codes	
RA	Reading ads --includes store ads in newspaper --includes classified ads
RAL	Reading alphabet letters --includes reading single letters
RB	Reading bills --includes reading a bank statement --includes reading a receipt --includes reading a paycheck stub
RBB	Reading the Bible
RBS	Reading a book/story
RC	Reading currency --includes food stamps --includes coupons --includes price labels
RCA	Reading print on calendars and appointment books
RCB	Reading a comic book --includes reading a comic strip or a cartoon in the newspaper
RCh	Reading chorally
RCP	Reading the caption of a picture/illustration --includes reading a one-word caption
RD	Reading documents --includes mortgage, public assistance

RDP	Reading directions (procedural) --includes reading recipes --includes reading shopping lists
RE	Reading "essay" --includes reading a piece of child dictation --includes reading long blocks of printed text (such as the reading of a church history)
REE	Reading print on electrical equipment
RF	Reading flyers
RGC	Reading greeting cards --includes reading Valentine cards --includes reading a message on a birthday cake
RH	Reading own homework (parent or child) --includes reading while studying for the GED exam
RI	Reading instruction --includes extra "homework" assigned by a parent
RIQ	Reading IQ test
RIW	Reading individual word(s) --includes response to child's request for reading of a word(s) --includes attempt to read individual word(s) --includes identification of individual word(s) being read in text (orally or by pointing) --excludes the reading of one-word caption(s)
RLI	Reading labels/titles for identification --includes labels on kitchen things --includes labels on toys --includes reading book titles, magazine and newspaper names, and titles of articles/stories
RLS	"Reading" letter strings

RLT	Reading print on lottery ticket --excludes matching of numbers on lottery ticket
RM	Reading menus
RMN	Reading a message or note --excludes the reading of a school communication --includes the reading of the researcher's notes
RN	Reading name(s) --includes reading name(s) in news stories --includes the reading of an autograph
RNM	Reading number(s) --includes the reading of a phone number from a phone book, an address book, or a team roster --includes matching numbers on lottery ticket or Wingo game --includes reading numbers on TV
RP	Reading printed pictures/posters
RPB	Reading phone books --excludes reading only a phone number
RPD	Reading print in drawings
RPG	Reading print on games --includes print on game pieces --includes "reading" game board
RPE	Reading print on an envelope --excludes reading only the name
RPI	Reading periodical for information --includes reading horoscope in newspaper
RPL	Reading postal letter
RPO	Reading print on personal objects --includes reading print on mug

RPP	Reading periodicals for pleasure --includes reading magazines --includes reading newspaper stories for entertainment and/or fun --includes the daily (or routine) reading of a newspaper --includes horoscope in newspaper
RPR	Pretend reading --includes pretend reading of books and newspapers
RPS	Reading print on cassettes --includes cassette tape print --includes print on videotapes --includes print on Nintendo cassettes
RS	Reading signs --includes store signs --includes traffic signs --includes directional signs --includes school signs
RSC	Reading school communication/information --includes reading daycare communication/information --includes reading information about camps and other special programs for children
RSG	Reading schedules/guides --includes reading of bus schedules --includes reading of TV/cable guides --includes reading of programs
RSK	Reading scribbles
RSL	Reading song lyrics, jingles
RSN	Reading a sentence
RSP	Reading school work papers --includes parent reading child's papers
RTC	Reading print on trading cards (baseball, football, etc.) --excludes reading name(s) only

RTFC	Reading text on food containers --excludes reading of labels on food containers --includes reading questions on cereal box
RTR	Reading text as written reference --includes reading books, magazines, and newspapers as written reference
RTV	Reading print on TV screen
RWM	Reading words made with magnetic letters

Writing Codes

WAE	Writing addresses on envelopes --includes writing names on the envelopes of cards
WAL	Writing alphabet letters --includes practicing sign language alphabet
WC	Writing checks
WCA	Writing on/in calendars/appointment books
WCP	Writing a caption on a picture/illustration --includes writing a one-word caption
WE	Writing "essay" --includes writing down a piece dictated by a child
WFA	Writing to fill in application
WH	Writing homework --includes writing while studying for the GED exam
WI	Writing instruction --includes "extra" homework assigned by a parent
WID	Writing in drawings --includes writing similar to I♡ U

WIW	Writing individual words (invented) / exploring code --includes making "words" with magnetic letters --includes spelling words orally (excludes spelling names orally) --includes writing letter strings --includes spelling words with tiles --excludes writing one-word caption(s) on picture/illustration
WJ	Writing journal entry
WL	Writing a list --includes writing a shopping list --includes writing a things-to-do list --includes writing a list of questions --includes writing directions to a Nintendo game (directions gotten over the phone)
WM	Writing messages --includes phone messages --includes notes
WMGC	Writing a message on a greeting card --includes writing a message on a child-drawn picture/card --includes writing "To ____ " or "From ____ " on the inside of a greeting card
WN	Writing name(s) --includes labeling with names --includes spelling names orally
WNM	Writing number(s) --includes filling out a bank deposit slip
WP	Writing practice --includes copying other print
WPL	Writing a postal letter
WPM	Writing poetry
WPN	Writing phone number

WS	Scribbling
WSI	Spelling/Printing instruction --includes instruction in how to form letters --includes providing models
WSN	Writing a sentence
W?	Use when the researcher does not specify the type of writing being done

Looking at Codes

LAB	Looking at a book
LAC	Looking at a coupon --includes looking at receipts
LACA	Looking at a calendar/appointment book
LACB	Looking at a comic book, comic strip, or cartoon
LACt	Looking at a catalogue
LAI	Looking at an illustration
LADP	Looking at directions (procedural)
LAP	Looking at a periodical --includes looking at a newspaper and magazine
LASchP	Looking at school papers
LASP	Looking at a screen with print on it
LATC	Looking at a trading card

Talking Codes

TA	Talk about . . . --TA is placed before the appropriate reading or writing code. For example, talk between a focal child and mother about a book being read would be coded TARBS: FC, M. --the "talk" can •include comments on content (including illustrations) •include associations with content •include connections with own life
TOR	Talk offering to read
TR	Talk requesting . . . --TR is placed before the appropriate reading or writing code. For example, a child requesting that a parent write a word would be coded TRWIW: FC/M.
TRM	Talk requesting printed material
TSA	Talk - singing the alphabet song
TSG	Talk playing "sound" games
TWR	Talk questioning meaning of words being read

Miscellaneous Codes

ChB	Choosing a book
DP	Drawing pictures
*FCKn	Evidence (or possible evidence) of focal child's knowledge of print for which no other code appears appropriate --includes Focal Child statements similar to "green begins with 'g' "
PET	Play with electronic print toy

Ph	On the phone
*SC	Evidence of work completed at school (to aid in describing Focal Child's school literacy environment) --includes the displaying of a school-made book to a family member
(x?)	Add to a code when you know the literacy event has occurred more than once, but don't know exactly how many times it occurred [If you know the exact number of times a literacy event occurred, write that number after the code. Example: RBS: M/FC (x3)]

Notes:

Every literacy code should be followed by a colon and the person(s) involved in that literacy event.

Example: Focal Child is sitting at a table by herself and is writing some alphabet letters on a piece of colored paper.
Code: WAL: FC

If one person is reading to, writing for, or requesting something of another person, the code for the person who is reading, writing, or requesting is written first. This code is followed by a slash (/) and the slash is followed by the code of the person being read to, written for, or requested of.

Example: Mother is reading a book to the Focal Child.
Code: RBS: M/FC

If two people are discussing a book that has been read, try to determine who initiated the discussion. That person should be listed first. A slash should come next and the other participant in the discussion should follow. If there is more than one "other" participant, their codes should be separated by a comma.

Example: Focal Child initiates a discussion about a book with his mother and sibling.
Code: TARBS: FC/M, S_{R1}

APPENDIX D

Participant Structure Codes for Family Literacy Study
V. Purcell-Gates
7-21-93

Codes denote the relationship of the person to the focal child.

Mother: M

Father/Adult Male:

Father/Adult Male Residing in the Focal Child's Home: F_R

Father/Adult Male Visiting at the Focal Child's Home: F_V

Focal Child: FC

For all other participants, add a subscript of R for people residing in the focal child's home and a subscript of V for people visiting in the focal child's home. If a participant has more than one subscript, the Resident/Visiting subscript should appear first.

Siblings: $S_1, S_2, S_3, \ldots S_n$, where S_1 is the oldest child, S_2 is the next oldest, etc. (Resident siblings would be coded S_{R1}, S_{R2}, etc. and visiting siblings would be coded S_{V1}, S_{V2} etc.)

Grandparents:

Grandmother: GM

Grandfather: GF

Aunt: A

Uncle: U

Great-Aunt: GA

Cousin: C

Niece: NC

Nephew: NP

Friend of Focal Child's Parents: FOP

Friend of Focal Child and/or Siblings: FOC

Neighbor: N

Babysitter: BS

Sunday School Teacher: SST

Television Character: TVC

Unnamed child: XC

Unnamed man: XM

Unnamed woman: XF

Researcher: R